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FIG. 1

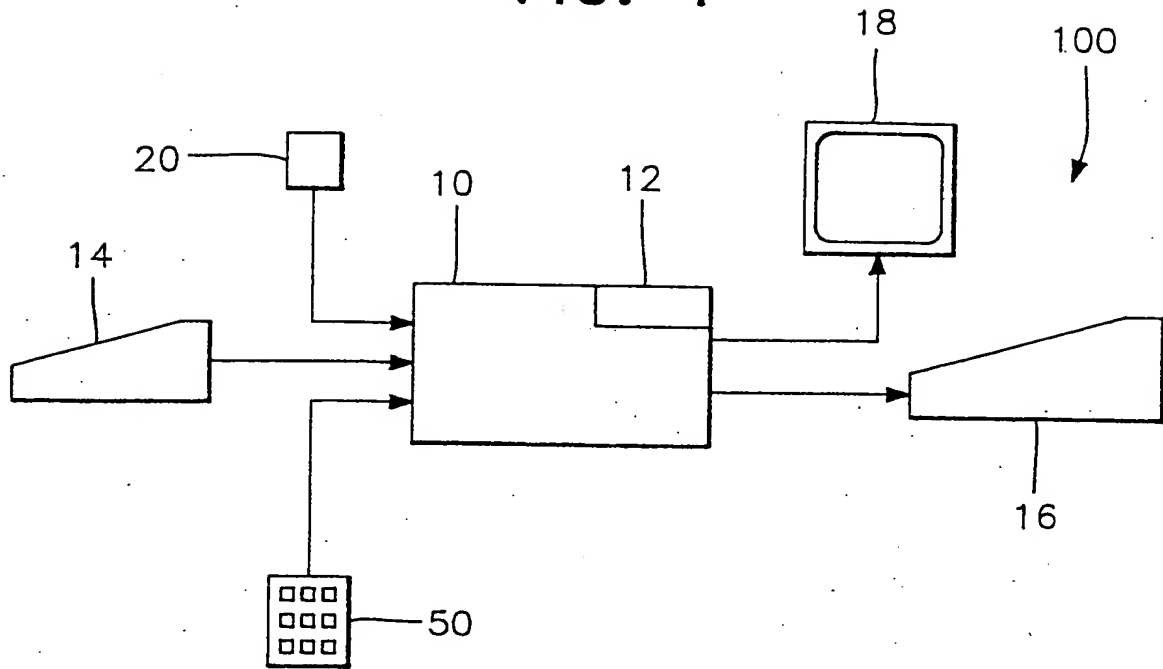
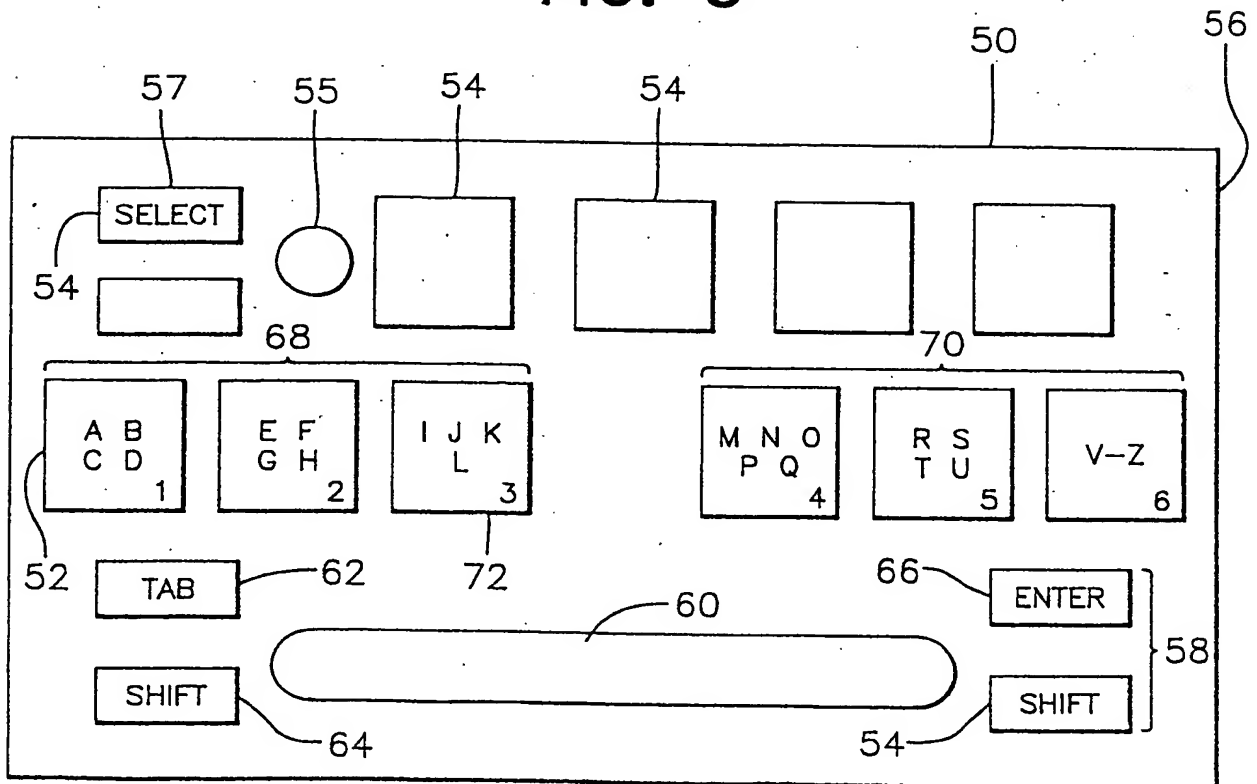


FIG. 3



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FIG. 2b

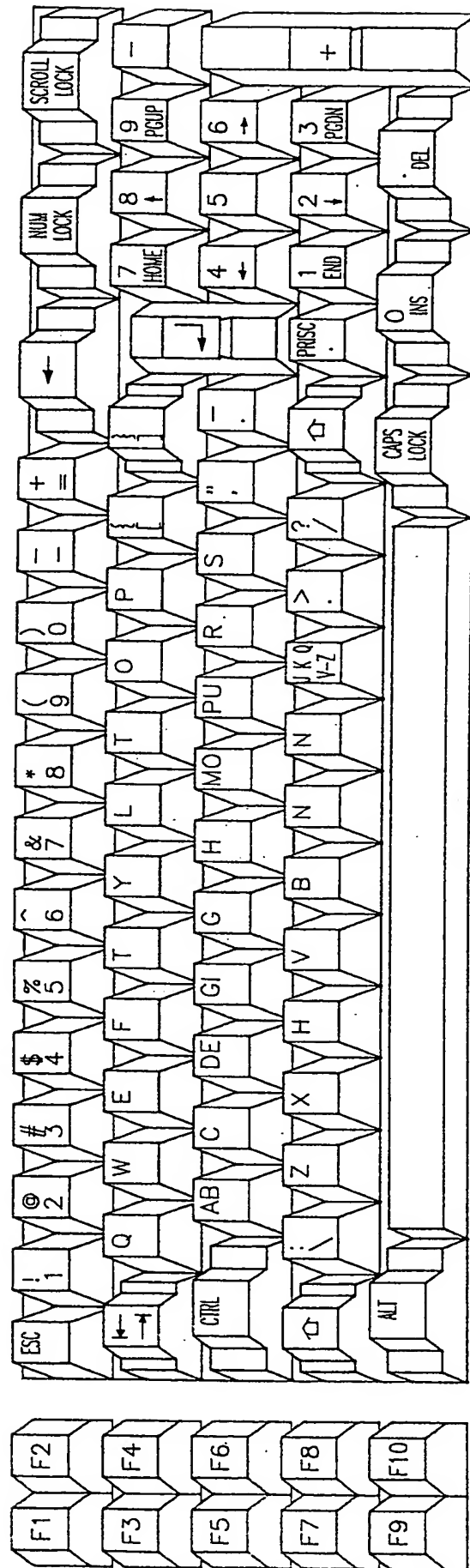


FIG. 4a

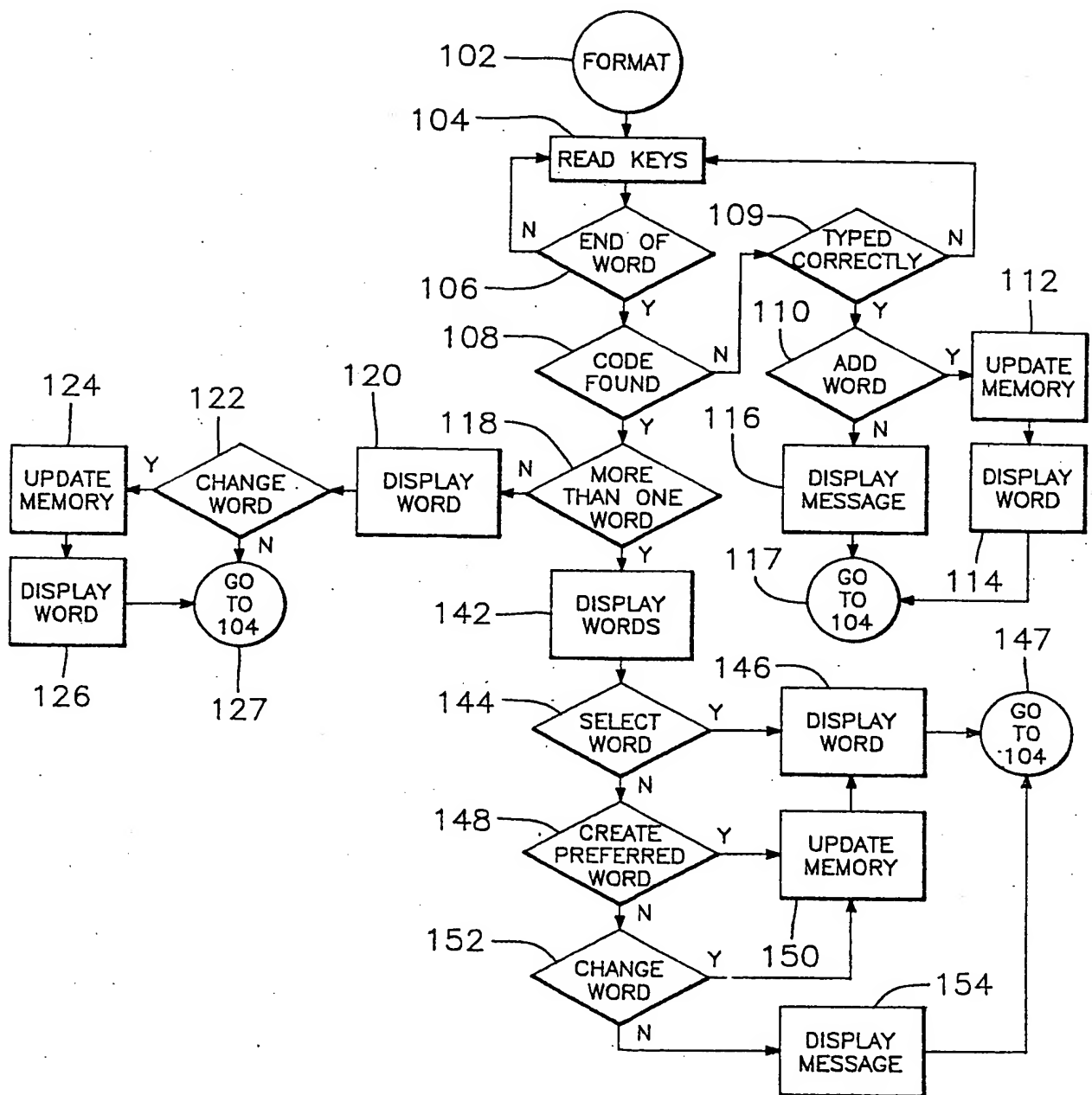


FIG. 4b

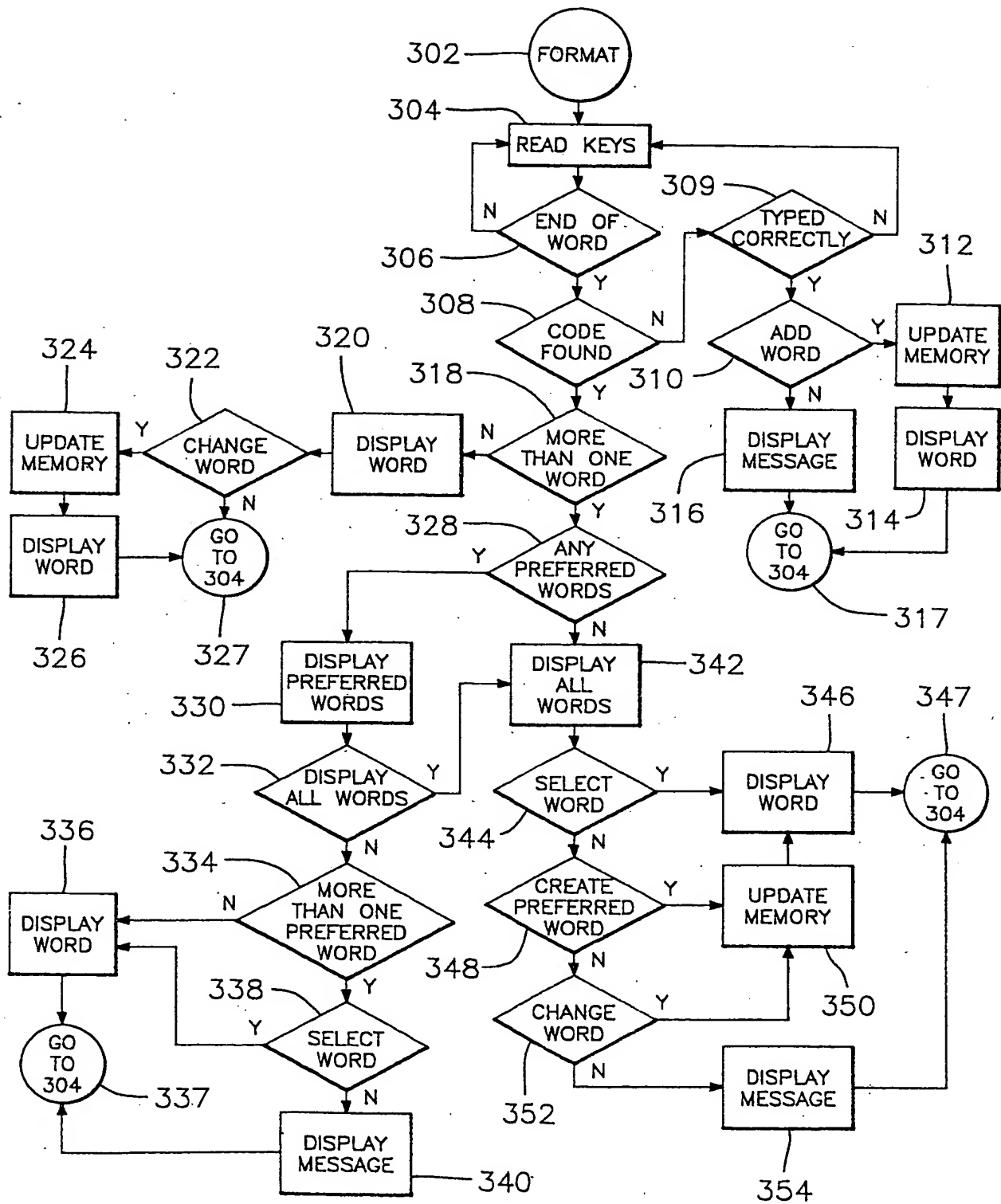


FIG. 5

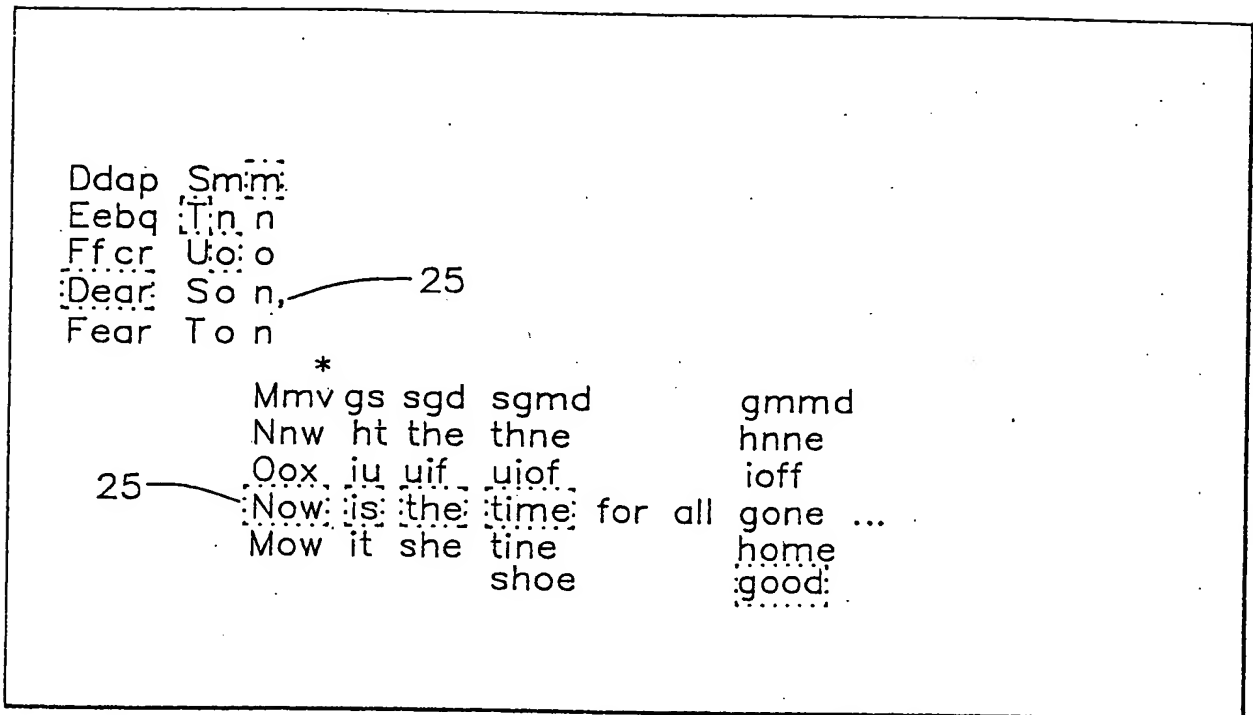


FIG. 7

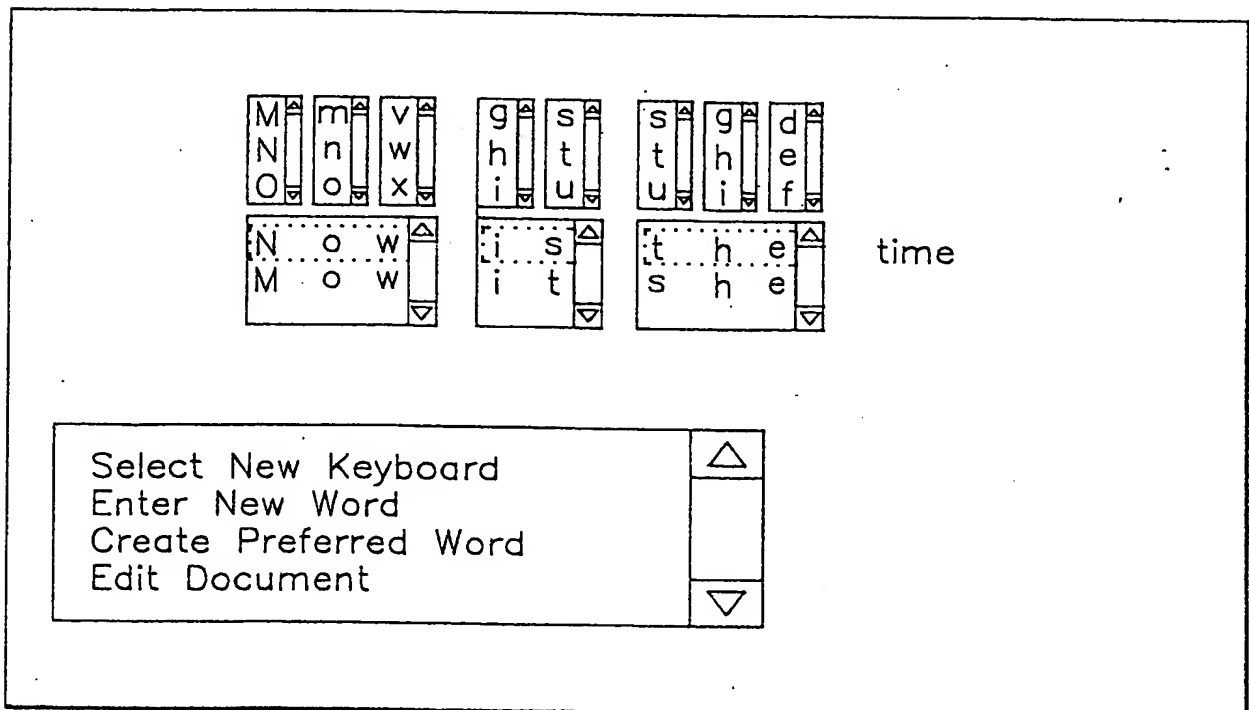


FIG. 6

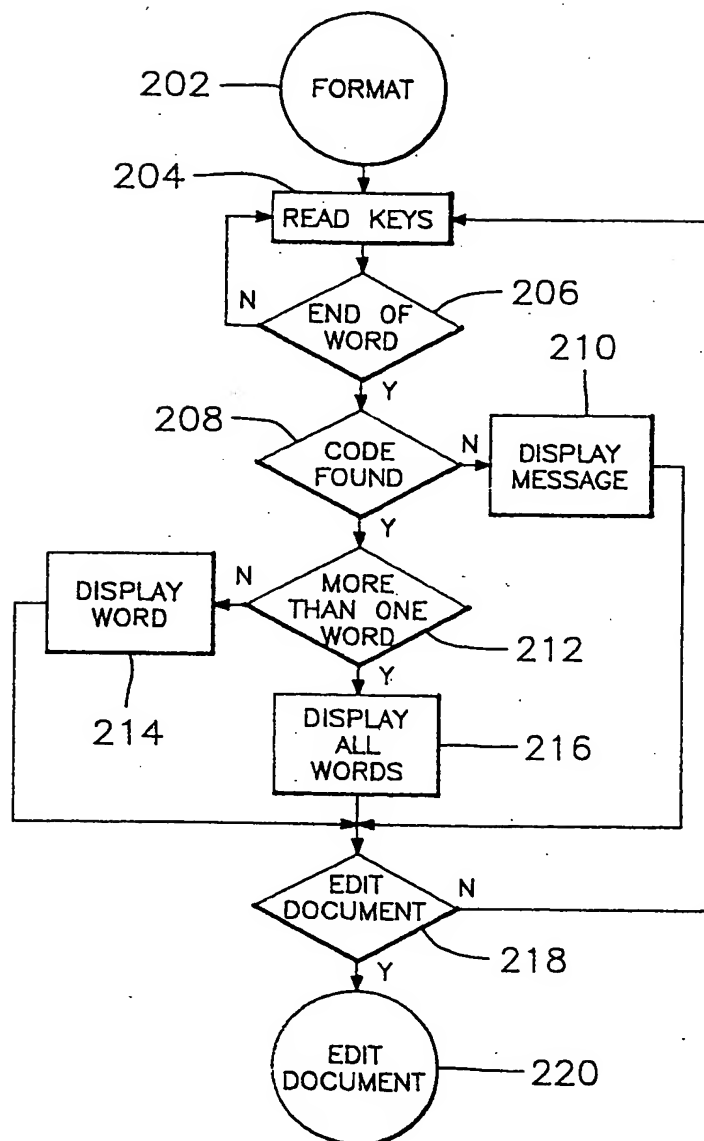


FIG. 8a

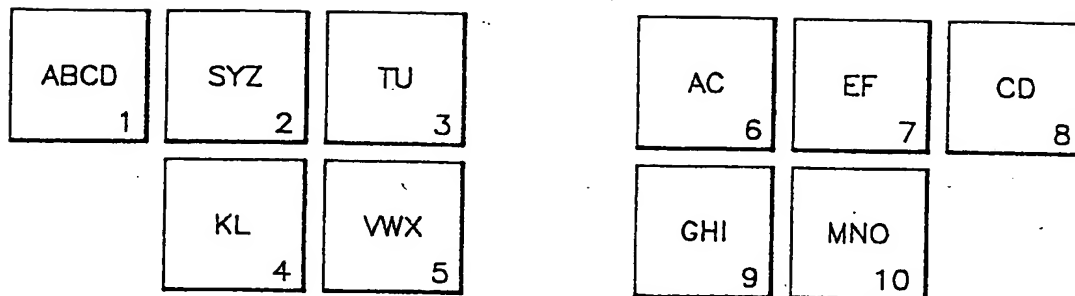


FIG. 8b

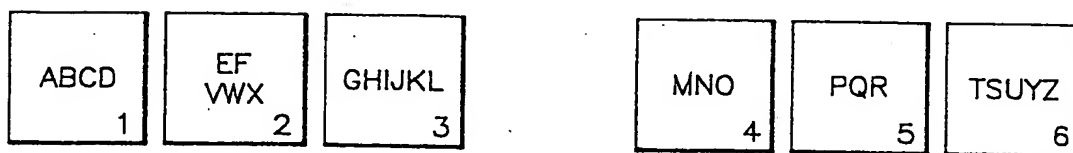


FIG. 8c

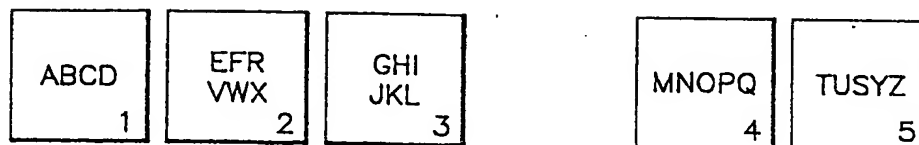


FIG. 10

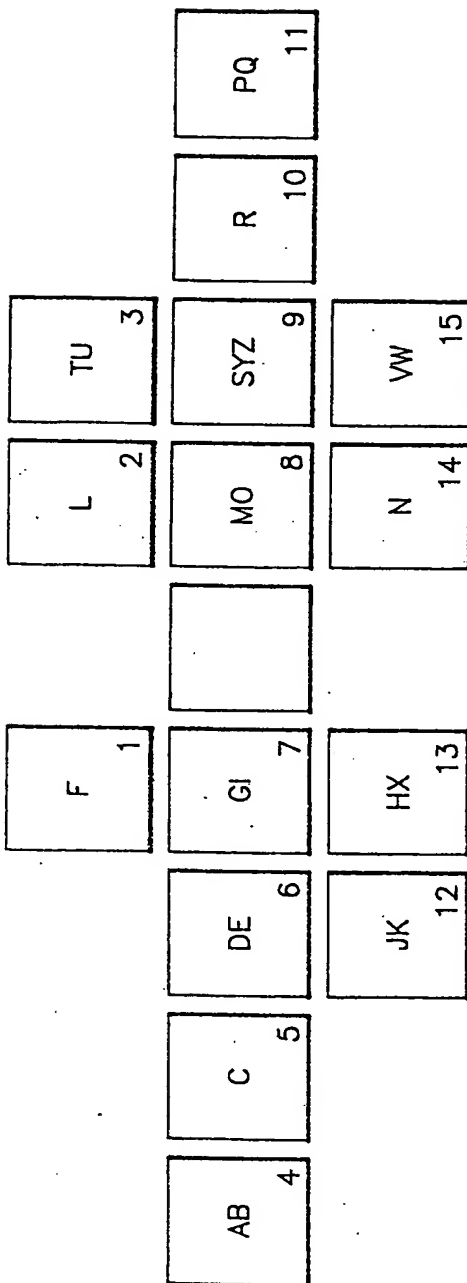


FIG. 11

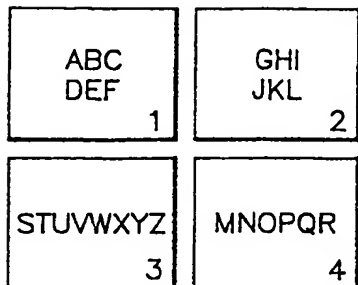


FIG. 12

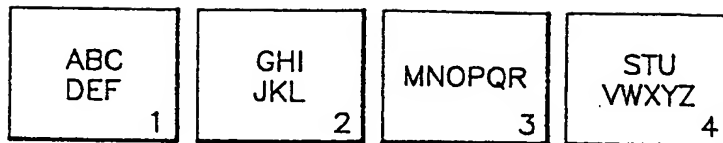


FIG. 13

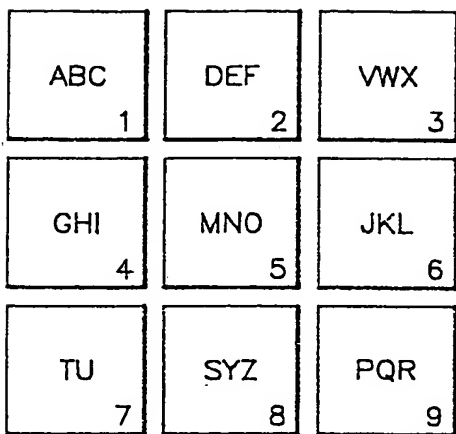


FIG. 14

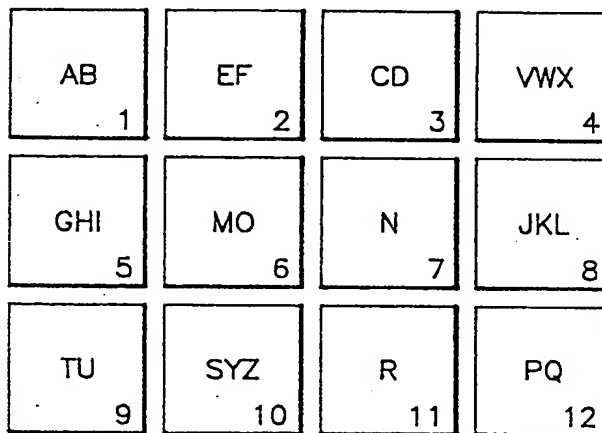


FIG. 15

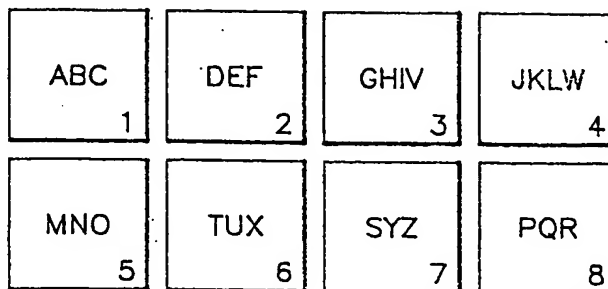


FIG. 16

JKL 1	AB 2	EF 3	CU 4	D 5
G 6	HIX 7	MO 8	N 9	VW 10
 11	T 12	SYZ 13	R 14	PQ 15

FIG. 17a

AB 1	CD EF 2	EF CD 3
GHI 4	MNO 5	JKL 6
TU 7	SYZ 8	PQR 9
VWX 10		

FIG. 17b

ABCD 1	EF VWX 2	GHIJKL 3
MNO 6	PQR 7	TSUYZ 8

FIG. 17c

ABCD 1	EFR VWX 2	GHI JKL 3
MNO PQ 4	TUS YZ 5	

FIG. 17d

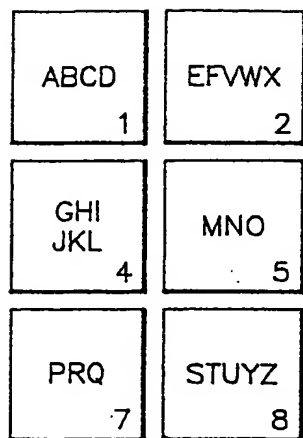


FIG. 18

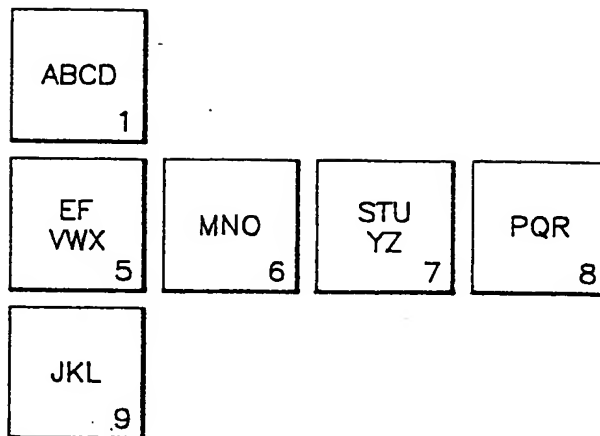


FIG. 19

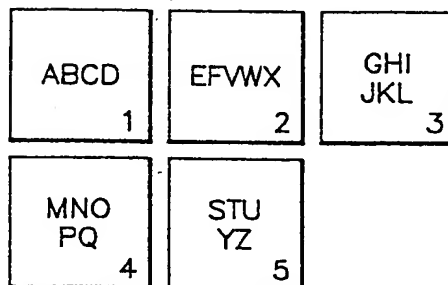


FIG. 20

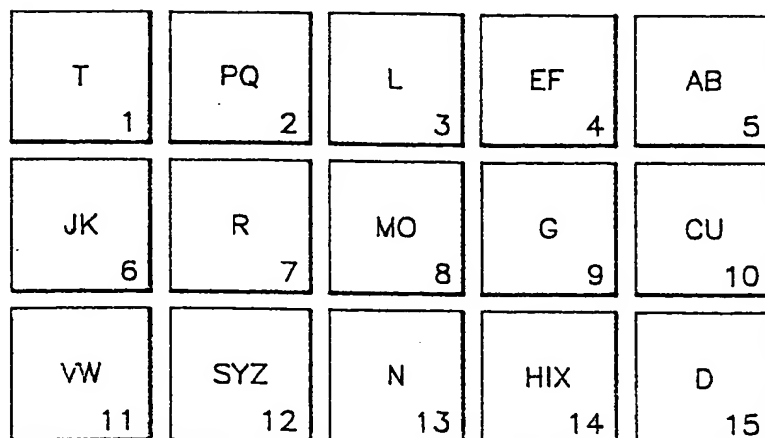


FIG. 21

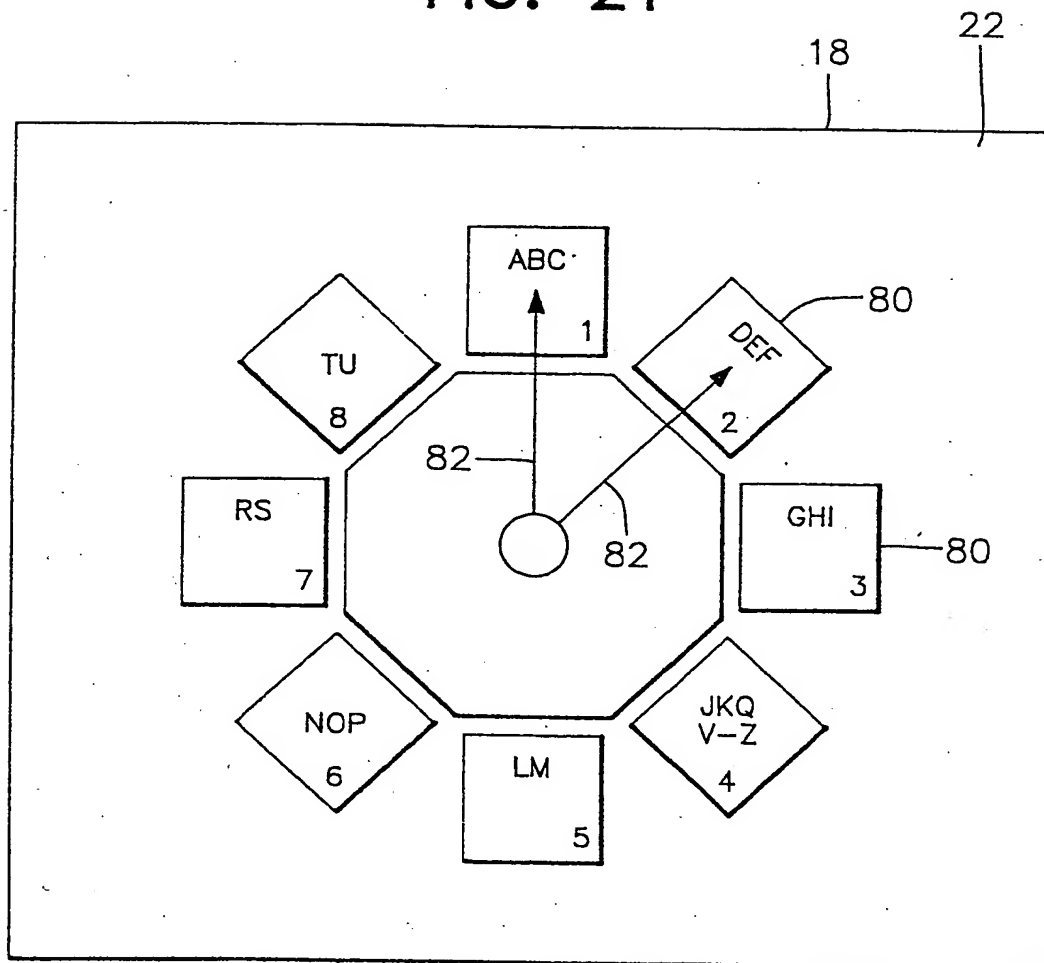


FIG. 22a

	A	B	C	D	E	F	G	H	I	J	K	L
A		12	14	11	243	13	8	11	293	0	9	51
B	12		104	104	32	99	105	67	1	33	15	91
C	14	104		70	16	79	73	84	7	17	21	79
D	11	104	70		53	68	88	65	6	18	69	128
E	243	32	16	53		11	38	39	138	1	65	71
F	13	99	79	68	11		49	55	1	23	26	88
G	8	105	73	88	38	49		36	3	16	39	54
H	11	67	84	65	39	55	36		3	21	35	108
I	293	1	7	6	138	1	3	3		2	2	23
J	0	33	17	18	1	23	16	21	2		1	23
K	9	15	21	69	65	26	39	35	2	1		63
L	51	91	79	128	71	88	54	108	23	23	63	
M	10	122	79	111	28	23	73	78	0	19	47	117
N	24	63	97	120	60	65	66	42	15	13	50	160
O	314	14	16	14	223	7	14	17	190	3	5	37
P	15	145	116	122	46	100	84	101	4	24	53	128
Q	0	0	0	0	0	0	3	0	0	0	0	0
R	62	102	86	176	50	69	67	100	21	22	53	269
S	35	90	116	92	32	97	65	75	9	17	33	126
T	22	126	147	209	121	107	120	121	10	25	89	173
U	214	3	4	8	96	3	4	2	167	0	4	11
V	4	27	35	51	7	29	31	18	1	7	33	49
W	13	90	67	68	25	59	63	78	14	13	24	72
X	6	9	4	9	6	1	11	0	0	0	3	5
Y	18	30	13	43	109	13	31	23	17	7	9	24
Z	1	9	11	23	5	3	7	6	0	2	9	17

FIG. 22b

	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
A	10	24	314	15	0	62	35	22	214	4	13	6	18	1
B	122	63	14	145	0	102	90	126	3	27	90	9	30	9
C	79	97	16	116	0	86	116	147	4	35	67	4	13	11
D	111	120	14	122	0	176	92	209	8	51	68	9	43	23
E	28	60	223	46	0	50	32	121	96	7	25	6	109	5
F	23	65	7	100	0	69	97	107	3	29	59	1	13	3
G	77	66	14	84	0	67	65	120	4	31	63	11	31	7
H	72	42	17	101	0	100	75	121	2	18	78	0	23	6
I	0	15	170	4	0	21	9	10	167	1	14	0	17	0
J	19	13	3	24	0	22	17	25	0	7	13	0	7	2
K	47	50	5	53	0	53	33	89	4	33	24	3	9	9
L	117	160	37	128	0	269	126	173	11	49	72	5	24	17
M		78	11	154	0	114	83	129	3	48	71	6	36	12
N	78		20	114	0	189	101	183	10	41	62	15	33	14
O	11	20		19	0	48	9	17	128	1	12	1	23	2
P	154	114	19		0	108	107	187	7	50	109	11	38	14
Q	0	0	0	0			2	0	0	0	0	0	0	0
R	114	189	46	108			119	164	24	57	68	9	27	18
S	83	101	9	107	2	119		182	10	46	60	6	24	14
T	129	183	17	187	0	164	182		8	60	137	19	58	26
U	3	10	128	7	0	25	10	8		4	4	0	10	0
V	48	41	1	50	0	57	46	60	4		22	2	4	14
W	71	62	12	109	0	68	60	137	4	22		11	42	8
X	6	15	1	11	0	9	6	19	0	2	11		7	0
Y	36	33	23	38	0	27	24	58	10	4	42	7		1
Z	12	14	2	14	0	13	14	26	0	14	8	0	1	

FIG. 22c

1	AJ	AJ	AJ	AJK	AJK	AB	AB	AB	AB	AB
2	B	B	BU	BU	BU	C	CU	CD	CD	CD
3	C	C	C	C	C	D	D	EF	EF	EF
4	D	D	D	D	D	EF	EF	G	GHI	GHI
5	E	E	E	E	EF	G	G	HIX	JKX	JKL
6	F	F	F	F	G	HIX	HIX	JK	L	MO
7	G	G	G	G	HX	JK	JK	L	MO	N
8	H	H	HX	HX	L	L	L	MO	N	PQ
9	K	K	K	L	MI	M	MO	N	PQ	R
10	L	L	L	MI	N	NO	N	PQ	R	SYZ
11	MI	MI	MI	N	OV	PQ	PQ	R	SYZ	TU
12	N	N	N	OV	PQ	R	R	SYZ	TU	VWX
13	O	OV	OV	PQ	R	S	SYZ	TU	VW	
14	PQ	PQ	PQ	R	S	T	T	VW		
15	R	R	R	S	T	WUZ	VW			
16	S	S	S	T	W	VY				
17	T	T	T	W	YZ					
18	UXZ	UXZ	W	YZ						
19	V	W	YZ							
20	W	Y								
21	Y									
F#1	1	1	15	26	26	60	100	174	219	315
F#2	1	1	6	15	26	125	177	251	275	362
F#3	11	13	26	45	69	252	359	510	567	749
Edit (line)	1000	1000	200	100	60	15	10	6.5	6	4

FIG. 22d

1	AB	AB	ABC	ABC	ABCD	ABCD	ABCD
2	CD	CD	DEF	DEF	EFVWX	EFVWX	EFRVWX
3	EF	EF	GHI	GHIV	GHIJKL	GHIJKL	GHIJKL
4	GHI	GHI	JKL	JKLW	MNO	MNO	MNOPQ
5	JKL	JKL	MNO	MNO	PQR	PQR	TUSYZ
6	MNO	MNO	PQR	PQR	SYZ	TUSYZ	
7	PQ	PQR	SYZ	SYZ	TU		
8	R	SYZ	TU	TUX			
9	SYZ	TU	VWX				
10	TU	VWX					
11	VWX						
F#1	413	521	690	847	1094	1379	1711
F#2	500	624	836	968	1257	1588	2086
F#3	1053	1330	1870	2219	3091	4092	5918
Edit (line)	3	2.25	2.0	1.5	1.0	0.8	0.5

FIG. 22e

ABC	DEF	GHI	JKL		MNO	PQR	SVW	TUX
-----	-----	-----	-----	--	-----	-----	-----	-----

FIG. 22f

AB	CD	EF	GHI		MNO	PQR	SYZ	TU
			JKL		VWX			

FIG. 22g

AB	CD	EF	GHI		MO	N	PQ	R
			JKL		TU	SYZ	VWX	

FIG. 22h

		D	JK		MO			
A	CU	EF	HIX		N	PQ	R	SYZ
		G	L		T	VW		

FIG. 22i

		D	JK		M			
AB	C	EF	HIX		NO	PQ	R	S
		G	L		T	VY	WUZ	

FIG. 22j

		MNO		JKL	
ABC	DEF	GHIZ		PQR	SWWY
		TUX			

FIG. 22k

		EF		JKL		
CD	AB	GHI		PQR	SYZ	VWX
	MNO	TU				

FIG. 22l

			JKL		N		
CD	AB	EF	GHI		PQ	R	SYZ
		MO	TU		VWX		

FIG. 22m

C	D	EF	AB					
G	JK	L	HIX		T	SYZ	R	PQ
		M	NO		WUZ	VY		

FIG. 22n

					MI			
AJ	B	C	D		N	PQ	R	S
E	F	G	H		OV	T	UXZ	W
		K	L		Y			

FIG. 22o

CD	EF	AB		N		
JKL	MO	GHI		SYZ	R	PQ
		TU		VWX		

FIG. 22p

CD	EF	AB		JKX	VW	
L	MO	GHI		SYZ	R	PQ
	N	TU				

FIG. 22q

D	C	B	AJ		L	N		
H	G	F	E		T	S	R	PQ
	K	MI	OV		UXZ	W	YZ	

FIG. 22r

ABC	DEF	
GHIZ	MNO	JKL
TUX	SVWY	PQR

FIG. 22s

	AB	EF	CD
VWX	GHI	MNO	JKL
	TU	SYZ	PQR

FIG. 22t

CD	AB	EF	GHI
JKL	M	NO	TU
PQ	R	SYZ	VWX

FIG. 22u

AB	CD	EF	GHI
JKX	L	MNO	N
PQ	R	SYZ	TU
		VW	

FIG. 22v

AB	CU	D	EF	G
JK	L	N	MO	HIX
PQ	R	SYZ	T	VW

FIG. 22w

AB	C	D	EF	G
JK	L	N	MI	HX
PQ	R	SO	TU	WX
		VY		

FIG. 22x

B	K	D	E	AJ
L	N	MI	HX	JK
PQ	R	S	T	OV
F	G	W	Y	UXZ

FIG. 23

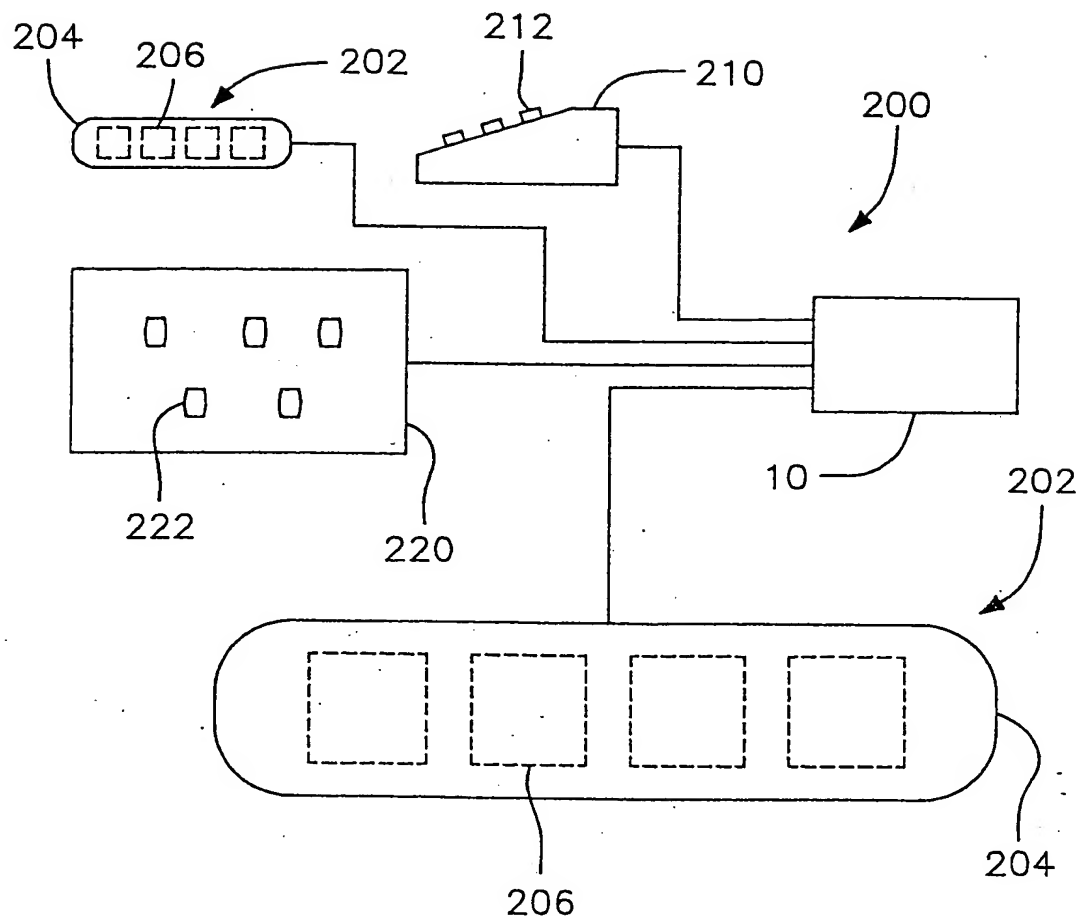


FIG. 24a

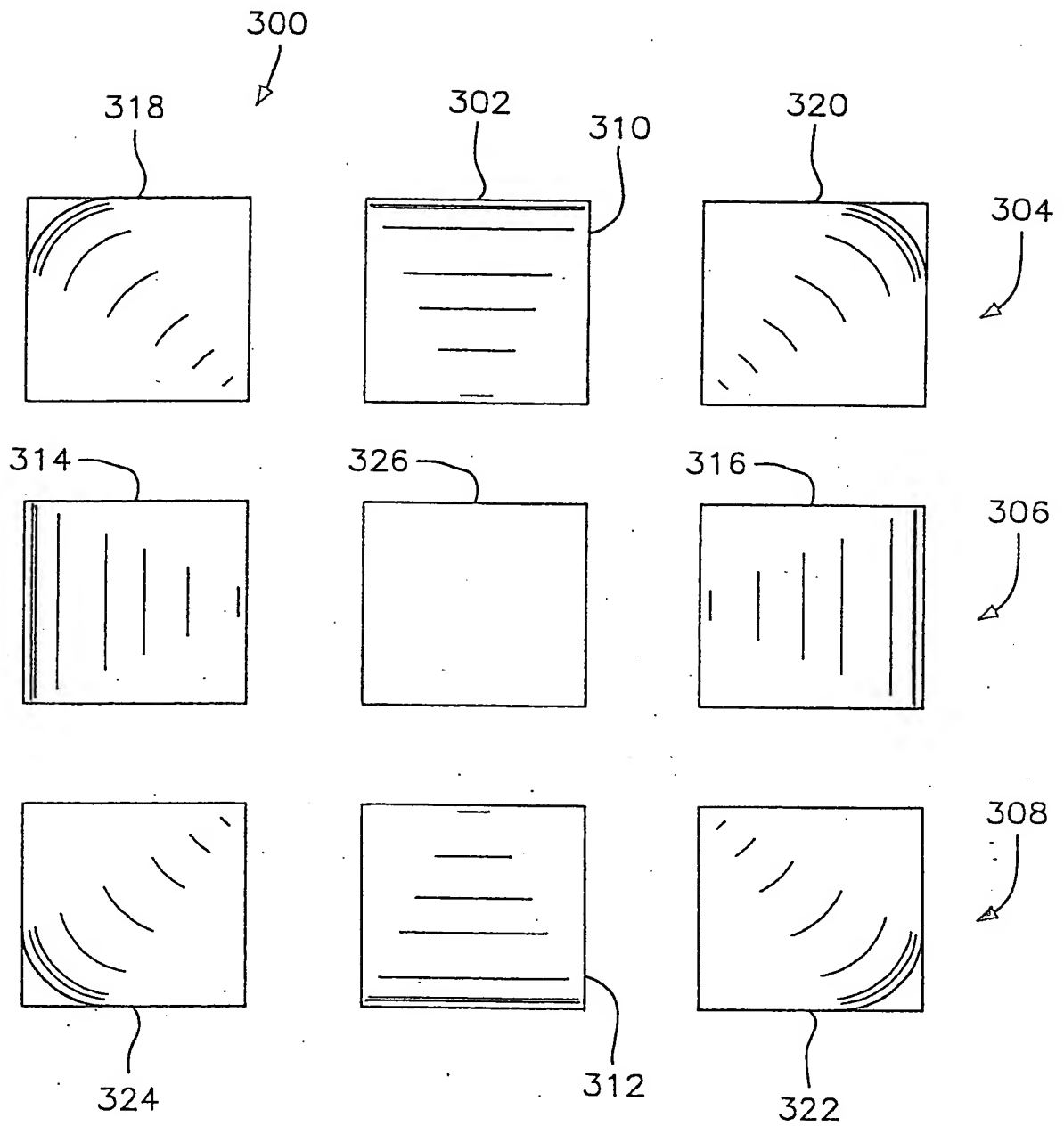


FIG. 24b

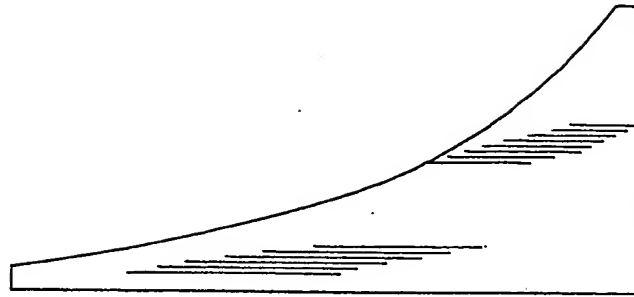


FIG. 24c

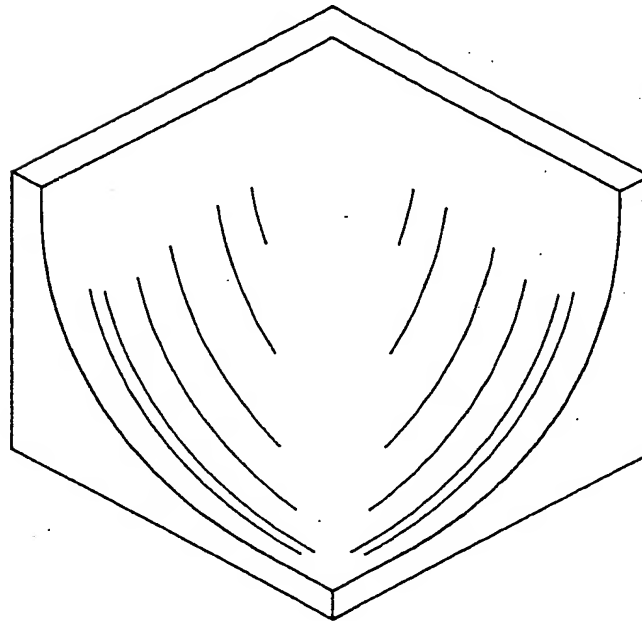


FIG. 25

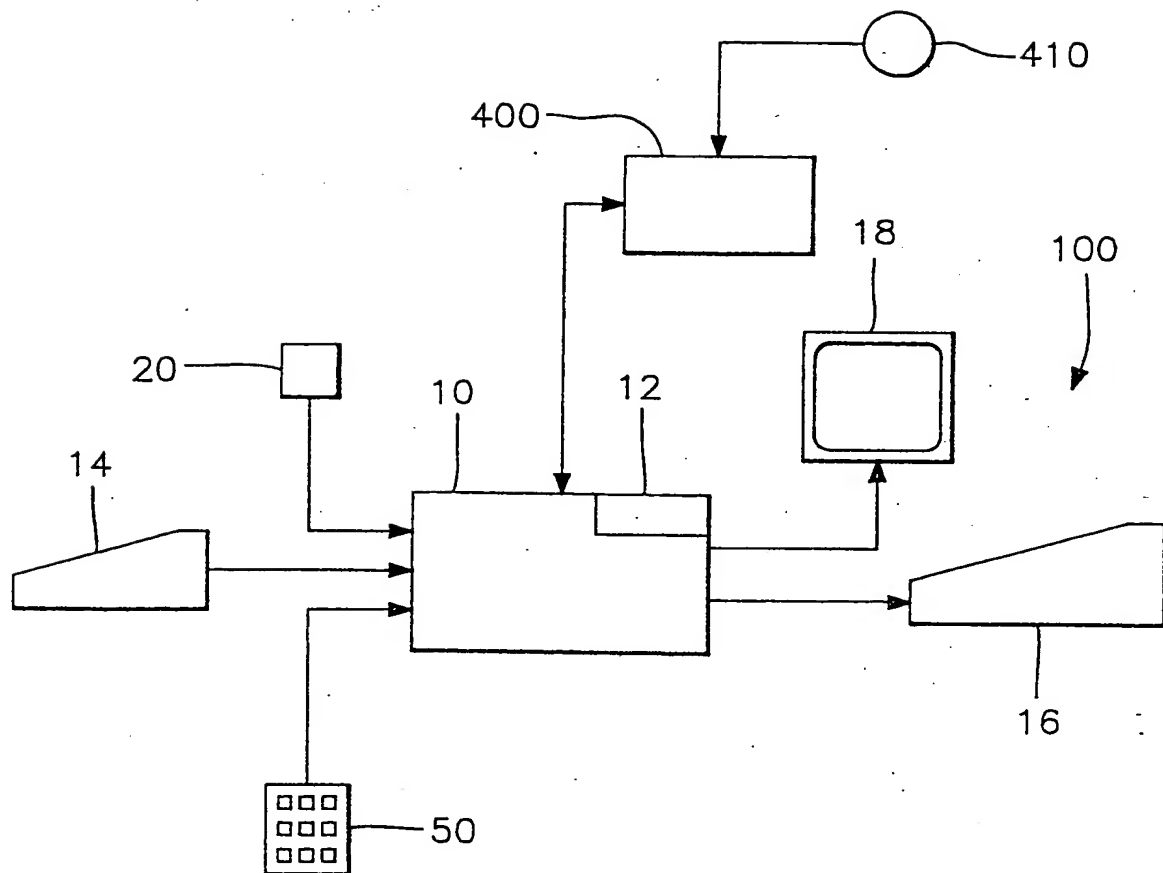


FIG. 26a

ABC	GHI	MNO	STU
DEF	JKL	PQR	V to Z

FIG. 26b

AB	EF	IJK	HOP	S to
CD	GH	LM	QR	Z

FIG. 26c

ABC	DEF	GHI	NOP	JKL	S to
			QR	M	Z

FIG. 26d

AB	EF	IJ	MN	STU	PQ
CD	GH	KL	O	M	R
			V to Z		

FIG. 26e

AB	EF	IJ	V to	MN	ST	PQ
CD	GH	KL	Z	O	U	R

FIG. 26f

J	GHI	DE	AB	MNO	PQR	STU
KL		F	C			
				V to Z		

FIG. 26g

DE	AB	MN	PQ
F	C	O	R
JK	G	V to	ST
	HI	Z	U

FIG. 26h

CD	EF	AB		NO	SYZ	R
M	JKL	GHI		TU	VWX	PQ

FIG. 26i

				N		
CD	EF	AB		MO	SYZ	R
JK	L	GHI		TU	VWX	PQ

FIG. 26j

					M		
	CD	EF	AB		NO	SYZ	R
JK	L	G	HI		TU	VWX	PQ

FIG. 26k

					M		
D	C	EF	AB		NO	SYZ	R
JK	L	HI	G		TU	VWX	PQ

FIG. 26l

					M			
D	C	EF	AB		NO	S	R	PQ
JK	L	G	HI		TU	VW	XYZ	

FIG. 26m

			C		M			
	B	EF	AB		N	PQ	R	S
JK	L	G	HI		TU	V	WX	YZ

FIG. 26n

DE	AB
F	C
JK	GH
L	I

MN	PQ	S
O	R	
U to	T	
Z		

FIG. 26o

JK	GH	DE	AB
L	I	F	C

MN	PQ	S	T
O	R		
U to Z			

FIG. 26p

JK	GH	DE	AB
L	I	F	C

MN	PQ	S
O	R	
T	U to Z	

FIG. 26q

CD	EF	AB
	JK	GH
	L	I

MN	PQ	S
O	R	YZ
TU	VW	
	X	

FIG. 26r

JK	CD	EF	AB
L			
			GH
			I

MN	PQ	S	T
O	R		
U to Z			

FIG. 26s

ABC	GHI
DEF	JKL
STU	MNO
V to Z	PQR

FIG. 26t

STU, V to Z			
ABC	GHI	MNO	
DEF	JKL	PQR	

FIG. 26u

STU	ABC	GHI	MNO
V to Z	DEF	JKL	PQR

FIG. 26v

ABC	GHI	MNO	STU
DEF	JKL	PQR	V to Z

FIG. 26w

AB	EF	
CD	GH	
FJK	NOP	S to Z
LM	QR	
S to Z		

FIG. 26x

S	AB	EF
to	CD	GH
Z	IJK	NO
	LM	PQR

FIG. 26y

AB	EF	IJ	NOP
CD	GH	KL	QR
	S to Z		

FIG. 27a

AB	GH	
C	I	
DE	JK	NO
F	LM	PQR
	S to Z	

FIG. 27b

AB	GH	NO
C	I	PQR
DE	JK	S to Z
F	LM	Z

FIG. 27c

AB	DE	GH
C	F	I
JK	NO	S to Z
LM	PQR	Z

FIG. 27d

AB	EF	
C	GH	
IJ	MN	
KL	O	
T	S	PQR
XYZ	UVW	

FIG. 27e

AB	EF	TX	
CD	GH	YZ	
IJ	MN	SU	P
KL	O	VW	QR

FIG. 27f

AB	EF	
CD	GH	
IJ	MN	
KL	O	
T	SW	P
UV	XYZ	QR

FIG. 27g

AB	EF	T	
CD	GH	UV	
FJ	MN	SW	PQ
KL	O	XYZ	R

FIG. 27h

AB	EF	
CD	GH	
IJ	MN	
KL	O	
V to	S	P
Z	TU	QR

FIG. 27i

AB	E	V to	
CD	FGH	Z	
IJ	MN	S	PQ
KL	O	TU	R

FIG. 27j

AB	EF	S
CD	GH	TU
IJ	MN	PQ
KL	O	R
V to Z		

FIG. 27k

ABC	GHI	MNO
DEF	JKL	PQ
	R	
S	T	
XYZ	UVW	

FIG. 27l

AB	DE	GH	JK
C	F	I	L
MN	PQ	ST	V to
O	R	U	Z

FIG. 27m

AB	DEF	GH	JKL
C		I	
MN	PQ	ST	
O	R		
	U to	Z	

FIG. 27n

U to Z	AB	DE	GH	JK
	C	F	I	L
	MNO	PQR	ST	

FIG. 27o

ABC	DE F	GH I	JK L
MN O	PQ R	S	T
	U to Z		

FIG. 27p

U to Z	ABC	DEF	GH I	JK L
	MN O	PQ R	S	T

FIG. 27q

AB C	DE F	GH I	JK L
MNO	PQ R	S	
T	U to Z		

FIG. 27r

AB C	DE F	GH I
MN O	PQ R	S
T	U to Z	JK L

FIG. 27s

AB C	DE F	GH I
PQ R	MN O	JK L
S	T	U to Z

FIG. 27t

AB	EF	CD	
GHI	MO	N	JK L
TU	SY Z	R	P Q

FIG. 27u

AB	EF	CD	JK
GH	M O	N	L
TU	SY Z	R	PQ
	V W X		

FIG. 27v

AB	EF	CD	
GH I	MO	N	JK L
T	S	R	PQ
	V to Z		

FIG. 27w

AB	EF	CD	JK
GH I	M O	N	L
T	S	R	PQ
	V to Z		

FIG. 27x

AB	EF	CD	VW	G
HI X	MO	N	L	JK
TU	S YZ	R	P Q	

FIG. 27y

A	E	C	D	G
B	F	U		
HI X	NO	M	L	JK
T	SY Z	R	P Q	VW

FIG. 27z

AB	EF	CD	G	
HI	M	NO	L	JK
T	S	R	PQ	
	U	to	Z	

FIG. 28a

A	E	C	D	G
B	F			
HI	M	NO	L	JK
T	S	R	PQ	
	Z			
	V	to	Z	

FIG. 28b

AB	EF	CD
GH	MN	JK
I	O	L
T	SY	PQ
U	Z	R
V	W	X

FIG. 28c

	AB	EF	CD
JK	GH	M	N
L	I	O	
	TU	SY	PQ
		Z	Z
	V	W	X

FIG. 28d

AB	EF	CD
GH	MN	JK
I	O	L
T	S	PQ
		R
U	to	Z

FIG. 28e

	AB	EF	CD
JK L	GH I	NO	M
	T	S	PQ R
	U	to	Z

FIG. 28f

AB	CD	EF
GH	JK	MN
I	L	O
T	S	PQ
		R
	U to Z	

FIG. 28g

	AB	DE
1	C 2	F 3
GH	JK	MN
I 4	L 5	O 6
PQ	TU	WX
RS 7	V 8	YZ 9
*		#
	0	

FIG. 28h

A	E	C	D	G
B	F			
HI	M	O	N	L
T	S	R	P	J
			Q	K
	V	to	Z	

FIG. 28i

AB	EF	C	D	G
HIX	GO V	N	M	L
T	S	R	P Q	J K
YZ	UW			

FIG. 28j

AB	EF	C	D	G
HIX	OV	N	M	L
T	S	R	PQ	JK
YZ	UW			

FIG. 28k

A	E	C	D
B	F		
GH	M	OV	N
I			
T	S	R	P
			Q
X	U	L	J
YZ	W		K

FIG. 28l

A	E	C	D	G
B	F			
H	O	N	M	L
I				
T	S	R	P	J
			Q	K
U	W	X		
V		YZ		

FIG. 28m

A	E	D	C	B
HI	O	N	M	L
T	S	R	P	JK
			Q	
UV	W	X	F	G
		YZ		

FIG. 29a

AB	EF
CD	GH
MN	RS
OPQ	TU
IJ	VW
KL	XYZ

FIG. 29b

AB	EF
CD	GH
MN	IJ
OPQ	KL
RS	VW
TU	XYZ

FIG. 29c

AB	EF
CD	GH
IJ	MN
KL	OPQ
RS	VW
TU	XYZ

FIG. 29d

AB	EF	
CD	GH	
MN	PQ	ST
O	R	U
IJ	VW	
KL	XYZ	

FIG. 29e

AB	EF	
CD	GH	
MN	IJ	RS
OPQ	KL	
TU	VW	
	XYZ	

FIG. 29f

AB	EF	
CD	GH	
IJ	MN	RS
KL	OPQ	
TU	VW	
	XYZ	

FIG. 29g

AB	DE	GH
C	F	I
MN	PQ	ST
O	R	U
JK	VW	
L	XYZ	

FIG. 29h

AB	DE	GH
C	F	I
PQ	MN	JK
R	O	L
ST	VW	
U	XYZ	

FIG. 29i

AB	DE	GHI
C	F	
J	MN	PQ
KL	O	R
ST	VW	
U	XYZ	

FIG. 29j

AB	DE	GH
C	F	I
MN	PQ	S
O	R	
TU	JK	VW
	L	XYZ

FIG. 29k

AB	DE	GH
C	F	I
PQ	MN	JK
R	O	L
S	TU	VW
		XYZ

FIG. 29l

AB	DE	GHI
C	F	
J	MN	PQ
KL	O	R
S	TU	VW
		XYZ

FIG. 31a

17 Key

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ }	← BACKSPACE
		C	D	H	M	*	N	S	W	...	[]	
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER ↵
		AB	EF	IJK	*	*	OP	TU	XYZ	:	,	
⇧ SHIFT	Z	X	C	V	L	*	B	N	M	<	?	⇧ SHIFT
				G				QR	V	,	.	! \

FIG. 31b

16 Key

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ }	← BACKSPACE
		C	D	H	M	*	N	S	...	...	[ ]
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER ↵
		AB	EF	IJK	*	*	OP	TU	XYZ	:	,	
⇧ SHIFT	Z	X	C	V	L	*	B	N	M	<	?	⇧ SHIFT
				G				QR	VW	,	.	! \

FIG. 31c

15 Key

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ }	← BACKSPACE
	C	D	GH	L	*	.	QR	S	XYZ	....	[ ]
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER ↵
	*	AB	EF	IJK	M	N	OP	TU	VW	...	,	
	....	Z	X	C	V	B	N	M	<	>	?	SHIFT ↵
SHIFT ↵				*	*	*	*	*	*	.	/	

FIG. 31d

15 Key

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ }	← BACKSPACE
	C	D	L	*	*	*	N	SZ	...	....	[ ]
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER ↵
	*	AB	EF	IJK	M	N	OP	TU	XYZ	...	,	
	....	Z	X	C	V	B	N	M	<	>	?	SHIFT ↵
SHIFT ↵				GH	M	*	QR	VW	.	.	/	

FIG. 31e

10 Key

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ [	} ]	← BACKSPACE
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	,	ENTER
SHIFT	Z	X	C	V	B	N	M	<	>	.	?	/	SHIFT

FIG. 32a

17 Key

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ [	} ]	← BACKSPACE
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	,	ENTER
SHIFT	Z	X	C	V	B	N	M	<	>	.	?	/	SHIFT

FIG. 32b

16 Key

* TAB	Q	W AB ...	E EF ..	R IJK .	T * .	Y * .	U N .	I S ..	O	P { } []	← BACKSPACE
CAPS LOCK	A	S C ...	D G ..	F L ⊙	G * .	H * .	J OP ⊙	K TU ..	L XYZ ;	" ,	ENTER ↵
⇧ SHIFT	Z	X D ...	V H ::	B M .	N QR .	M VW ..	< ,	> .	? /	⇧ SHIFT	/ \

FIG. 32c

15 Key

* TAB	Q	W AB ...	E EF ..	R IJK .	T * .	Y N .	U S ::	I O	P { } []	→ BACKSPACE
CAPS LOCK	A	S C ...	D GH ..	F L ⊙	G * .	H * *	J OP ⊙	K TU ..	L XYZ ; :	ENTER ↵
⇧ SHIFT	Z	X D ...	C M ::	V * .	B * .	N QR .	M VW ..	< ,	> . ? /	⇩ SHIFT

14 Key

* TAB	Q	W AB ...	E EF ..	R IJK .	T M .	Y .	U N .	I S ..	O VW ...	P { } []	← BACKSPACE
CAPS LOCK	A	S CD ...	D GH ..	F L .	G * .	H * .	J OP .	K TU ..	L XYZ ...	" : ;	ENTER ↵
⇧ SHIFT	Z	X ...	C * .	V * .	B * .	N QR .	M * ..	< .	? /	⇧ SHIFT	

12 Key

* TAB	Q	W AB ...	E EF ..	R IJK .	T * .	Y . .	U MN .	I RS ..	O VW ...	P { } []	← BACKSPACE
CAPS LOCK	A	S CD ...	D GH ..	F L °	G * .	H * .	J OPQ °	K TU ..	L XYZ ...	: ; ;	ENTER ↵
⇧ SHIFT	Z	X	C * ..	V * .	B * .	N * .	M < .	> .	? /	⇧ SHIFT	

FIG. 33a

18 Key

* TAB	Q	W	E	R	T	Y	U	I	O	P	{	}	← BACKSPACE
	AB	C	D	.	*	.	N	OP	QR	*	[]	
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	,	ENTER ↵
	EF	G	H	.	K	*	S	TU	V	:	.	.	
SHIFT ↵	Z	X	C	V	M	.	B	N	M	<	>	.	SHIFT ↵
	...	IJK	L	.	.	.	*	W	XYZ	,	.	.	!

FIG. 33b

16 key

* TAB	Q	W	E	R	T	Y	U	I	O	P	{	}	← BACKSPACE
	AB	C	D	.	*	.	N	OP	QR	*	[]	
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	,	ENTER ↵
	EF	G	H	.	K	*	S	TU	VW	:	.	.	
SHIFT ↵	Z	X	C	V	M	.	B	N	M	<	>	.	SHIFT ↵
	...	IJK	L	.	.	.	*	W	XYZ	,	.	.	!

FIG. 33c

15 Key

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ } []	← BACKSPACE
	AB	CD	EF	GH	IJK	L	M	N	OP	QR	STU	VW
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER
		EF	GH	IJK	L	M	N	OP	QR	STU	VW	ENTER
SHIFT		Z	X	C	V	B	N	M	<	>	?	SHIFT

FIG. 33d

14 Key

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ } []	← BACKSPACE
	AB	CD	EF	GH	IJK	L	M	N	OP	QR	STU	VW
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER
		EF	GH	IJK	L	M	N	OP	QR	STU	VW	ENTER
SHIFT		Z	X	C	V	B	N	M	<	>	?	SHIFT

FIG. 33e

Keys 12

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ } []	← BACKSPACE
	AB	CD	EF	*	*	*	MN	OPQ	RS	....	
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER
	GH	IJK	L	*	*	*	TU	VW	XYZ	...	,	↵
SHIFT	Z	X	C	V	B	N	M	<	>	.	?	SHIFT
	*	*	*	*	*	*	*	*	/	↵

FIG. 34a

Keys 14

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ } []	← BACKSPACE
	AB	CD	EF	*	*	*	LY	RX	V	W	....
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER
	GH	IJK	L	*	*	*	OPQ	TU	...	;	,	↵
SHIFT	Z	X	C	V	B	N	M	<	>	.	?	SHIFT
	....	...	*	*	*	*	SZ	.	.	.	/	↵

FIG. 34b

Keys 10

* TAB	Q	W	E	R	T	Y	U	I	O	P	{	}	← BACKSPACE
				*	C	D	LX	RY	VW	...	[]	
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	,	
				*	AB	EF	IJK	OPQ	TU	...			ENTER ↵
⇧ SHIFT	Z	X	C	V	B	N	M	<	>	.	?	/	⇧ SHIFT
				*		*	*	*	*	*			! \

FIG. 34c

Keys 12

* TAB	Q	W	E	R	T	Y	U	I	O	P	{	}	← BACKSPACE
				*	*	CD	LX	RY	VW	*	[]	
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	,	
			*	*	AB	EF	IJK	OPQ	TU	...			ENTER ↵
⇧ SHIFT	Z	X	C	V	B	N	M	<	>	.	?	/	⇧ SHIFT
				*		*	*	*	*	*			! \

FIG. 34d

Keys 11

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ [	} ]	← BACKSPACE
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	,	ENTER ↵
⇧ SHIFT	Z	X	C	V	B	N	M	<	>	.	?	/	⇧ SHIFT

FIG. 34e

Keys 10

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ [	} ]	← BACKSPACE
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	,	ENTER ↵
⇧ SHIFT	Z	X	C	V	B	N	M	<	>	.	?	/	⇧ SHIFT

FIG. 35a

Keys 12

* TAB ↑	Q	W ...	E ..	R * .	T * .	Y . AB	U . GH	I . MN	O . TU	P . XYZ ...	} []	← BACKSPACE
CAPS LOCK	A	S ...	D .	F * .	G * .	H . CD	J . IJK	K . OPQ ...	L . VW ...	" ; .	ENTER ↵	
⇧ SHIFT	Z	X ...	C * .	V * .	B . EF	N . L	M . RS ...	< ; .	? / .	⇧ SHIFT	⇧ SHIFT	

FIG. 35b

Keys 11

[illegible]

FIG. 35c

Key 10

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ }	← BACKSPACE
				*	*	ABC	JKL	RS	*	...	[]	
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER ↵
				*	*	DEF	MN	TU	XYZ	;	,	
SHIFT ↵	Z	X	C	V	B	GHI	OPQ	M	<	>	?	SHIFT ↵
				*	*						/	

FIG. 35d

Keys 11

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ }	← BACKSPACE
				*	*	AB	GHI	OPQ	W	*	...	
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER ↵
				*	*	CDX	JKL	RY	TU	;	,	
SHIFT ↵	Z	X	C	V	B	EKV	MN	M	<	>	?	SHIFT ↵
				*	*						/	

FIG. 35e

Keys 9

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ }	← BACKSPACE
					*	ABC	JKL	SYZ	*	...	[]	
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER
				*	*	DEF	MNO	TUX	VW	;	,	
SHIFT	Z	X	C	V	B	N	M	<	>	.	?	SHIFT
					*	CHI	PQR	*			/	

FIG. 36a

Keys 14

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ }	← BACKSPACE
					AB	CX	D	EF	GH	...	[]	
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER
				IJK	LY	M	N	OP	VW	;	,	
SHIFT	Z	X	C	V	B	N	M	<	>	.	?	SHIFT
				*	QR	SZ	TU	*			/	

FIG. 36b

Keys 13

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ [	} ]	← BACKSPACE
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	,	ENTER ↵
SHIFT ↵	Z	X	C	V	B	N	M	TU	<	>	?	/	SHIFT ↵

FIG. 36c

Keys 12

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ [	} ]	← BACKSPACE
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	,	ENTER ↵
SHIFT ↵	Z	X	C	V	B	N	M	TU	<	>	?	/	SHIFT ↵

FIG. 36d

Keys 11

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ [	} ]	← BACKSPACE
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	,	ENTER ↵
⇧ SHIFT	Z	X	C	V	B	N	M	<	>	.	?	/	⇧ SHIFT

FIG. 36e

Keys 10

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ [	} ]	← BACKSPACE
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	,	ENTER ↵
⇧ SHIFT	Z	X	C	V	B	N	M	<	>	.	?	/	⇧ SHIFT

FIG. 37a

Keys 13

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ }	← BACKSPACE
		RY	LX	D	C	*	*	..	...	...	[ ]
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER ↵
	TU	OPQ	IJK	EF	AB	*	*	..	...	;	,
⇧ SHIFT		Z	X	C	V	B	N	M	<	>	? /	⇧ SHIFT
			SZ	MN	GH	VW	*	..	,	.		! _ \

FIG. 37b

Keys 12

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ }	← BACKSPACE
		VW	RY	LX	CD	*	*	..	...	...	[ ]
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER ↵
	TU	OPQ	IJK	EF	AB	*	*	..	...	;	,
⇧ SHIFT		Z	X	C	V	B	N	M	<	>	? /	⇧ SHIFT
			SZ	MN	GH	VW	*	..	,	.		! _ \

Keys 10

* TAB	Q	W MN ...	E XYZ ..	R VW .	T * .	Y * .	U .	I ..	O ...	P { } []	← BACKSPACE
CAPS LOCK	A TU	S OPQ ...	D GHI ..	F DEF ⊖	G ABC .	H * .	J ..	K ..	L : ...	" ,	ENTER ↵
⇧ SHIFT	Z	X RS ...	C JKL ..	V * .	B * .	N .	M ..	< ,	> .	? /	⇧ SHIFT ↵

FIG. 38

Col I	Col II	Col I	Col II	Col I	Col II
QWERTY keyboard letters (Standard)	Redefined letter assignments to Col I Based on Fig. 31a	QWERTY keyboard letters (Standard)	Redefined letter assignments to Col I Based on Fig. 31a	QWERTY keyboard letters (Standard)	Redefined letter assignments to Col I Based on Fig. 31a
<u>Top row of keys</u>		<u>Middle row of keys</u>		<u>Bottom row of keys</u>	
Q		A		Z	
W	C	S	AB	X	
E	D	D	EF	C	G
R	H	F	IJK	V	L
T	M	G		B	
Y		H		N	R
U	N	J	OPQ	M	V
I	S	K	TU		
O	W	L	XYZ		
P					

FIG. 39

Display #1 He is very E
F

Display #2 He is very ER
FR

Display #3 He is very ERA
ERB
FRA

Display #4 He is very ERBI
FRAI

Display #5 He is very FRAIL

FIG. 49

FREQUENCY OF USE OF LETTERS ASSIGNED
BELOW HOME LINE — FOR FIRST LETTERS
OF WORDS

BELOW HOME LINE	
B	1211 words
E	811 words
J	179 "
V	459 "
U	606 "
X	10 "
Z	74 "
Q	109 "
TOTAL	3,464 WORDS

$$3,464/21,084 = 16.4\%$$

FIG. 40

Letters are redefined as shown in Fig. 1

Case#	Word being entered	Display#										
		1st	2nd	3rd	4th	5th	6th	7th	8th			
1	GREAT	G	GR	GRE	GRE A	GREAT						
					GREB							
2	ABAFT	A	AA				ABAFT					
		B	AB	ABA	ABAF	ABAFT						
			BA	BAB	BABE							
3	RELAY	R	RE	REL	RELA	RELAY	RELAY					
						RELAX						
4	REVILE	R	RE	REV	REVI	REVIL	REVILE					
5	FRIEND	E	ER	ERI				FRIEND				
		F	FR	FRI	FRIE	FRIEN	FRIEND					
6	ERA	E	ER	ERA	ERA							
		F	FR	ERB								
				FRA								
7	FRANK	E	ER	ERA			FRANK					
		F	FR	FRA	FRAN	FRANK						
				ERB								
8	FRAIL	E	ER	ERA			FRAIL					
		F	FR	FRA	ERBI							
				FRA	FRAI	FRAIL						
9	FRAIL	E	ER	ERA	ERBI	FRAIL						
		F	FR	ERB	FRAI	FRAIL						
				FRA								
10	ARID	A	AR	ARI	ARID	ARID						
		B	BR	BRI	BRID							

FIG. 41

Dictionary file for Method II (Each letter is in ASCII code)

Col I	Col II
WS	CB
WSK	CAT
WSKID	CAUSE
WJO	COW
EJC	DOG
MJKID	HOUSE

FIG. 42

Dictionary file for Method III

Column I	Column II
WS*	CB
WS*K*	CAT
WS*K**ID*	CAUSE
WJ*O	COW
EJ*C	DOG
MJ*K**ID*	HOUSE

FIG. 43

Col I	Col II
QWERTY keyboard letters used in Col I of the dictionary which when redefined match the letter on the same line in Col II	
W	C
E	D
R	H
T	M
U	N
I	S
O	W
C	G
V	L
N	R
M	V
S*	A
S**	B
D*	E
D**	F
F*	I
F**	J
F***	K
J*	O
J**	P
J***	Q
K*	T
K**	U
L*	X
L**	Y
L***	Z

FIG. 44

Letters Entered	EF	R	IJK	E	N	D	
Display #	I	II	III	IV	V	VI	VII
	E	ER	ERI	ERIE	ERIEN	ERIEND	FRIEND
	F	FR	ERJ	EFJE	ERJEN	ERJEND	
			ERK	ERKE	ERKEN	ERKEND	
			FRI	ERIF	ERIFN	ERIFND	
			FRJ	ERJF	ERJFN	ERJFND	
			FRK	ERKF	ERKFN	ERKFND	
				FRIE	FRIEN	FRIEND	
				FRJE	FRJEN	FRJEND	
				FRKE	FRKEN	FRKEND	
				FRIF	FRIFN	FRIFND	
				FRJF	FRJFN	FRJEND	
				FRKF	FRKFN	FRRFND	

FIG. 45

DISPLAY #	1	2	3	4	5	6
			Method IV			
"desire" Homeline	d	De	Des	Desi j Desi k	desir	desire
Method I with no selection key						
"desire" Homeline	d	De	Des	Desi	desir	desire
Method IV						
"fourth" Homeline	e f *	Fo Fp Fq	Fot fou *	Four	Fourt	fourth
Method I with no selection keys						
"fourth" Homeline	E F *	Eo Fo	Fou	Four	fourt	Fourth
Method IV						
"friend" Homeline	E F *	FR	Fri	Frie Frif	Frien	Friend
Method I with no select key ₂						
"friend" Homeline	E F *	ER FR	Eri Fri	Frie	Frien	Friend
Method I and Method IV						
"friend" Homeline	E F	FR	Fri	Frie	Frien	Friend

FIG. 46

BASED ON KEYBOARD ASSIGNMENT SHOWN ON FIG. 48A
AND FREQUENCY OF LETTER CHART — FIG. 47

Letters in Home Line	A	C	D	E	G	H	I	L	M	N	O	P	R	S	T	U	Y
Letters Below Home Line	B				F			J				V	Q	X		W	Z

The letters selected to be placed below home line and frequency of use in a sample of 1 million words.

Letter	Freq. of Use
B	1600 uses
F	2500 uses
J	400 uses
V	1200 uses
Q	400 uses
X	500 uses
W	1700 uses
Z	200 uses
TOTAL	8500 USER PER 106,400 USES = 8%

FIG. 47

Frequency of use of letters for 15 categories of tests with over one million words

LETTERS	NUMBER OF USES
E	12,000
T	9,000
A	8,000
O	8,000
I	8,000
N	8,000
S	8,000
R	6,400
H	6,200
L	4,400
D	4,000
C	3,400
U	3,000
M	3,000
F	2,500
P	2,000
G	2,000
W	1,700
Y	1,700
B	1,600
V	1,200
K	800
X	500
J	400
Q	400
Z	200
Total	106,400 Uses

Based on A. Zettersten, 1969, p. 61, and Cambridge Ency. of Language, pg. 86.

FIG. 48a

FREQUENCY OF USE FOR FIRST LETTER IN A
DICTIONARY OF 21,084 WORDS

First letter	Number of Words	Percentage
A	1353	6.4
B	1211	5.7
C	2137	10.1
D	1229	5.8
E	811	4.0
F	974	4.6
G	672	3.2
H	819	3.9
I	983	4.7
J	179	0.8
K	147	0.7
L	681	3.2
M	1133	5.4
N	441	2.1
O	509	2.4
P	1772	8.4
Q	109	0.5
R	941	4.5
S	2011	9.5
T	1079	5.1
U	606	2.9
V	459	2.2
W	697	3.3
X	10	0.0
Y	79	0.4
Z	42	0.2
Total	21,084.00 Words	100%

FIG. 48b






KEYBOARD ASSIGNMENT FOR CALCULATIONS ON FIGURES 46 AND 48A

Home line	A	C	D	E	G	H	I	K	L	M	N	O	P	R	S	T	W	Y	
Below home line	B			F			J					V	Q		X		U	Z	

FIG. 50

ESC	CTRL	F1 F6	F2 F7	F3 F8	F4 F9	F5 F10	ALT	PAUSE BREAK PRINT SCREEN	NUM LOCK
TAB C	(D	) H	[M	{ }	N 7	S 8	W 9	FN	BACK SPACE
\ AB	! EF	@ IJK	# *	\$ *	% OP	^ TU	& XYZ	* +	SHIFT
SHIFT	/ G	? L	\ *	: :	" QR	< V	> 3	ENTER	CAP LOCK
DELETE	INSERT	HOME PAGE DOWN	SPACE BAR		PAGE UP		△	▽	▷

Keys 13

*  	Q	W	E	R	T	Y	U	I	O	P	{ } []	← BACKSPACE
TAB	....	S	MN	GH	Ab	*	*	..	...	....
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER 
	XYZ	TU	OP	IJK	CD	*	*	..	...	:	,
 SHIFT	Z	X	V	B	N	M	<	>	?	/	 SHIFT	: ; /

Keys 12

* TAB	Q	W TU	E MN	R GH ..	T AB .	Y * .	U * .	I .. .	O .. .	P { } []	← BACKSPACE
CAPS LOCK	A XYZ	S VW	D OPQ	F IJK ..	G CD ⊙	H * .	J * ..	K .. .	L : :	" ,	ENTER ↵
↵ SHIFT	Z	X RS ...	C V L ::	B EF .	N * .	M < .	> .	? /	↵ SHIFT	!	

Keys 11

* TAB	Q XYZ	W OPQ	E GHI	R AB	T *	Y *	U .	I ..	O ...	P { } []	← BACKSPACE
CAPS LOCK			A S	D F	G H	J K	L :	;	ENTER ↵		
SHIFT ↵			VW	RS ...	JKL CD ⊙	* *	B *	N .	M <	? /	↵ SHIFT
			Z	X TU ...	C MN ..	V EF .					— /

Keys 1.0

* TAB	Q	W RS ...	E JKL ..	R ABC .	T * .	Y * .	U .	I ..	O ...	P { } []	← BACKSPACE
CAPS LOCK	A XYZ	S TU ...	D MN ..	F DEF ⊙	G * .	H * .	J ..	K ...	L :	" ;	ENTER ↓
SHIFT	Z	X VW ...	C OPQ ..	V GHI .	B * .	N * .	M ..	< .	> .	? /	SHIFT ↵

FIG. 51e

Keys 9

* TAB	Q	W SYZ ...	E JKL ..	R BC .	T * .	Y * .	U .	I ..	O ...	P { } []	← BACKSPACE
CAPS LOCK	A VW	S TUX ...	D MNO ..	F DEF .	G * .	H * .	J ..	K ..	L : :	" ,"	ENTER
⇧ SHIFT	Z	X ...	C PQR ...	V GHI .	B * .	N ..	M ..	< ,	> .	? /	⇧ SHIFT

FIG. 52a

14 Keys

* TAB	Q GH	W EF ...	E D ..	R CX .	T AB .	Y * .	U * .	I ..	O ...	P { } []	← BACKSPACE
CAPS LOCK	A OP	S M ...	D N ..	F LY .	G IJK .	H * .	J ..	K ..	L : :	" ,"	ENTER
⇧ SHIFT	Z	X VW ...	C TU ..	V S .	B QR .	N * .	M * ..	< ,	> .	? /	⇧ SHIFT

FIG. 52b

13 Keys

* TAB	Q GH	W EF	E D	R CX	T AB	Y *	U *	I ..	O ...	P { }	← BACKSPACE	
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER ↓
	VW	OP	MN	LY	IJK	*	..	..	...	;	,
⇧ SHIFT	Z	X	C	V	QR	B	N	M	<	.	?	⇧ SHIFT
	...	TU	SZ	..	..	*	..	..	,	.	/

FIG. 52c

12 Keys

* TAB	Q GH	W EF	E D	R CX	T AB	Y *	U *	I ..	O ...	P { }	← BACKSPACE	
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER ↓
	QR	OP	MN	JKL	*	..	..	..	...	;	,
⇧ SHIFT	Z	X	C	V	TU	B	N	M	<	.	?	⇧ SHIFT
	...	XYZ	VW	..	..	*	..	..	,	.	/

FIG. 52d

11 Keys

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ } []	← BACKSPACE
	...	...	EFV	CD	AB	*	*	..	...	...	...
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER
	RX	OPQ	MN	JKL	GHI	*	*	..	...	...	;	↵
	
SHIFT	Z	X	C	V	B	N	M	<	>	?	/	SHIFT
	...	...	WY	TU	S	*	..	..	.	.	.	↵

FIG. 52e

10 Keys

* TAB	Q	W	E	R	T	Y	U	I	O	P	{ } []	← BACKSPACE
	...	...	EFV	CDX	AB	*	.	..	...	...	...
CAPS LOCK	A	S	D	F	G	H	J	K	L	:	"	ENTER
	RS	OPQ	MN	JKL	GHI	*	*	..	...	...	;	↵
	
SHIFT	Z	X	C	V	B	N	M	<	>	?	/	SHIFT
	...	...	WYZ	TU	S	*	..	..	.	.	.	↵

[illegible]

16 KEYS

[illegible]

५५६

17 KEYS

[illegible]

五五五

12 KEYS

[illegible][illegible]

17 KEYS

							*	N	S	W			
							*	OP ⊙	TU	XYZ			
							*	M	H	IJK EF AB	C	G	L ⊙
							*	D	V	QR			

FIG. 57a

15 KEYS

AB	EF	IJK	NO	TM
C	g	LY	PQ	SZ
d	h	M	RX	VW
*	*	*	*	*

FIG. 57b

15 KEYS

AB	EF	IJK	OP	TU
C	G ⊙	L	QR	VW
D	H	MN	S	XYZ
*	*	*	*	*

FIG. 57c

12 KEYS

*	*	*	*	*
AB	EF	IJK	MN	RS
CD	GH ⊙	L	OPQ	TU
*	VW	XYZ	*	*

FIG. 57d

15 KEYS

AB	CY	D	NB	PQ
EF	G	HX	R	SZ
IJK	L	M	TU	VW
*	*	*	*	*

FIG. 57e

15 KEYS

C	G	LY	N	SZ
ab	ef	IJK	OPQ	TY
d	H	M	RX	VW
*	*	*	*	*

9 KEYS

		*	ABC	DEF	GHI	JKL	
		*	MNO ⊙	PQR	SYZ	TUX	
			VW	*	*	*	

15 KEYS

					*	AB	CY	D	EF	
					VW	GH ⊙	IJK	LX	MZ	
					*	N	OPQ	RS	TU	
						*	*	*	*	

12 KEYS

[illegible]

FIG. 58d

10 KEYS

		ABC	DEF	GHI
	*	JKL	MN	OPQ
	*	RS	TU	VW
		*	XYZ	*

FIG. 58e

9 KEYS

	ABC	JKL	SYZ	
	DEF	MNO	TUX	*
	GHI	PQR	VW	*
	*	*	*	

FIG. 58f

10 KEYS

ABC	JKL	RS	
DEF	MN	TU	*
GHI	OPQ	VW	*
*	XYZ	*	

FIG. 58g

16 KEYS

AB	EF	L	OP	TU
CY	GH ⊙	M	QR	V
D	IJK	N	S	W
*	*	XYZ	*	*

FIG. 58h

10 KEYS

ABC	GHI	MNO	S	VW
DEF	JKL ⊙	PQR	TU	XYZ
*	*	*	*	*

FIG. 59a

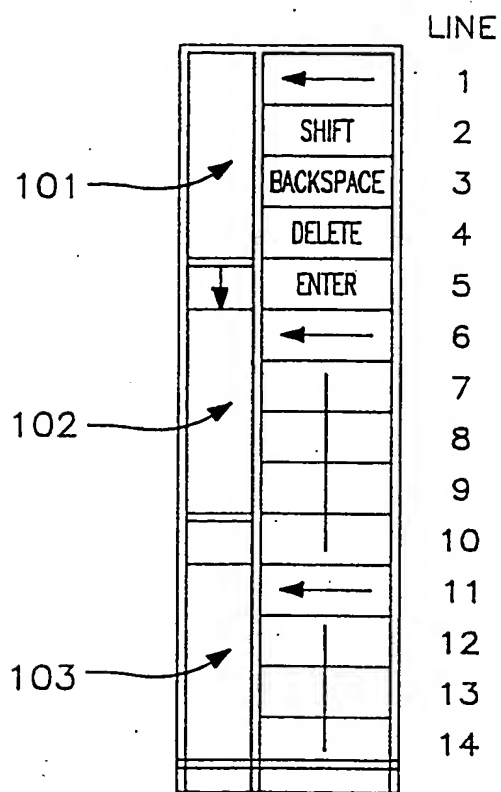


FIG. 59b

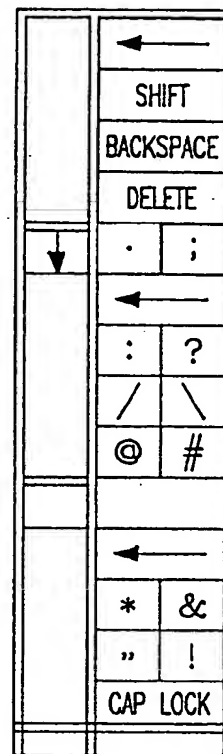


FIG. 59c

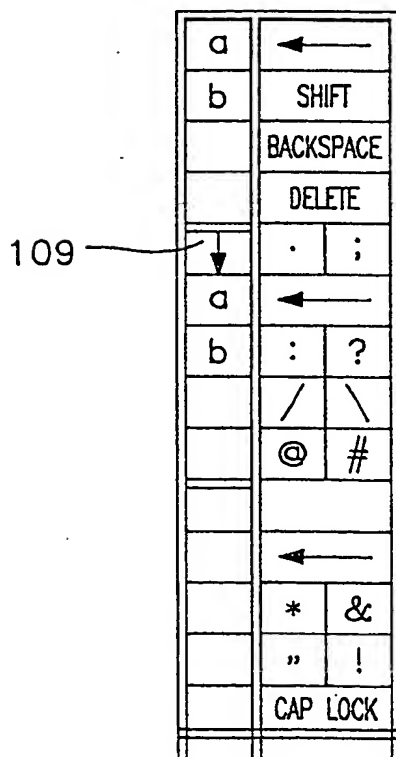


FIG. 59d

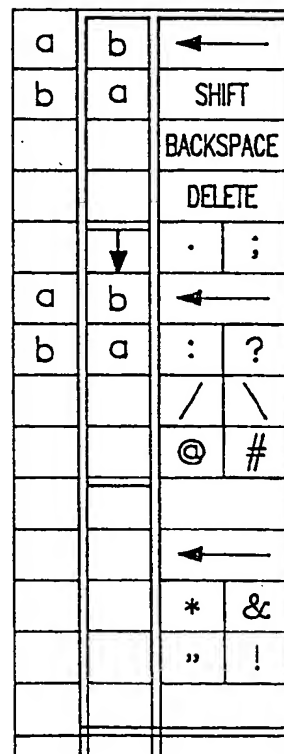


FIG. 59e

a	b	l	←
a	b	y	SHIFT
			BACKSPACE
			DELETE
		↓	· ;
a	b	l	←
b	a	y	: | ?
			/ \
			@ #
			←
			* &
			" !

FIG. 59f

col #	1	2	3	4	LINE #	
	a	b	L	e	1	105
					2	
					3	
					4	
					5	
	a	b	l	e	6	106
	b	a	y	f	7	
					8	
					9	
					10	
					11	107
					12	
					13	
					14	
						108

FIG. 60a

The man is

a	←	LINE #	1
b			2
			3
			4
↓			5
a	←		6
b			7

FIG. 60b

The man is

a	a	←	LINE #	1
a	b			2
b	a			3
b	b			4
	↓			5
a	a	←		6
b	b			7

FIG. 60c

The man is

b	a	Y	←	LINE #	1
a	b	L			2
a	b	Y			3
b	a	L			4
		↓			5
b	a	Y	←		6
a	b	L			7

FIG. 60d

col #	1	2	3	4		LINE #
The man is	a	b	I	E	←	1
	b	a	I	E		2
						3
						4
				↓		5
	a	b	I	E	←	6
	b	a	y	E		7

FIG. 60e

104 →

The man is able		←	LINE #
			1
			2
			3
			4
	↓		5
		←	6
			7

FIG. 61c

[illegible]

* RIGHT HAND

FIG. 61d

[illegible]

* LEFT HAND

FIG. 61e

[illegible]

* DENOTES LOCATION
OF FUNCTION KEYS
SELECT KEY #1
ARROW KEY
SCROLL KEY #1
SCROLL KEY #2
S/D MODE KEY

* RIGHT OR LEFT HAND

Figure 62

Keyboard
Assignment

Number of unintended
words displayed when
entering intended words
which result from the
letter assignments
in the left column

AB	23
CK	13
DJ	39
EF	12
GI	7
HO	30
LY	27
MX	6
NZ	12
PQ	0
R	0
S	0
TU	8
VW	24

Total: 201 $201 \div 41,790 = .5\%$

[illegible]


0017

[illegible]

002 ↗

[illegible]

003


 Marv's Window
 Normal Times New Roman 10 B I U
 Page 1 Sec 1 1/1 At:1 Ln:1 Col:1 REC TPC EXT OVP LG

										1										2										3										4										5																			
Mary's Window										Normal										Times New Roman										10										B I U																													
Page 1										Sec 1										1/1										At 1"										Ln										Col 1										REC TRK EXT OVR									

1		2		3		4		5		6		7		8		9		APW		LTR		BKS	
	q		w		e		r		t		y		u		i		p						
	a		s		d		n		x		c		v		b		m		/				
					f		g		h		j		k		l		.		,				
					z		x		v		p		q		r		s		'				
Help		Min/Max																					
Close		004 One Hand																					

004 ↑

004 ↑

67

FIG

1	2	3	4	5	6	7	8	9	WORD	ARITH	TR	BKS	LY	MX	NZ	PAD
													AB	CK	DJ	
													EF	GI	HO	TU
													PQ	R	S	ENT
													MIN MAX			
													.005			
													SPACE BAR			
													SVC			
													VW			

005

FIG 70

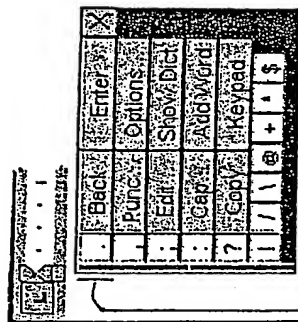
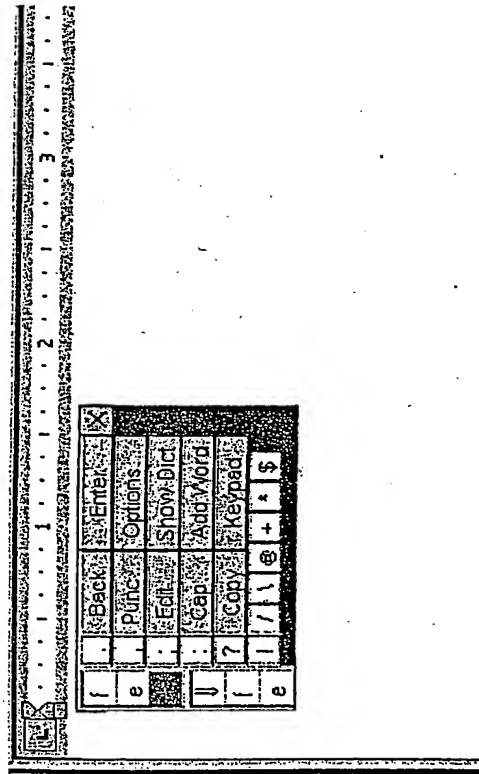


Fig. 71



11

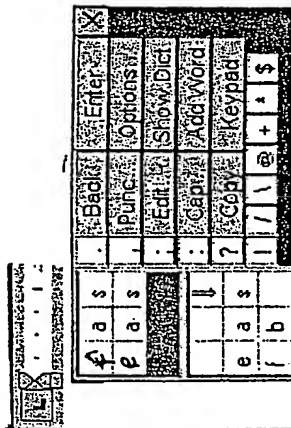


FIG 74

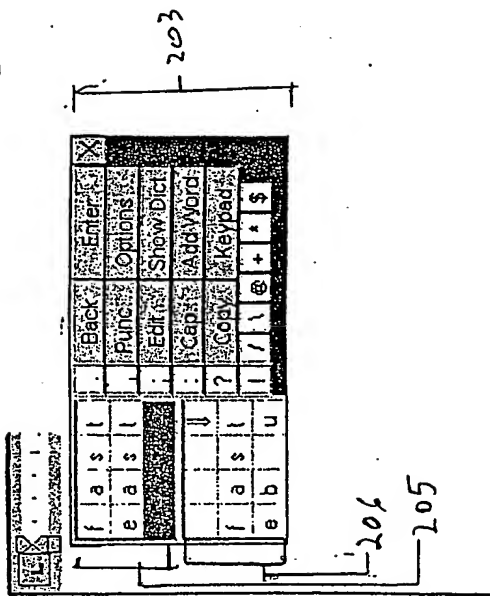


FIG 75A

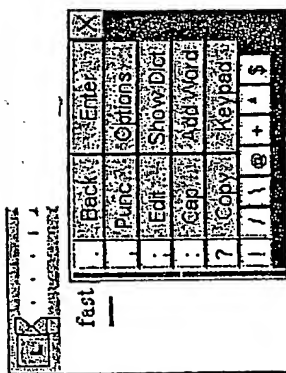
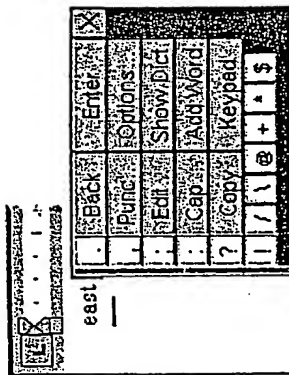


FIG 75 B



11



FIG 77

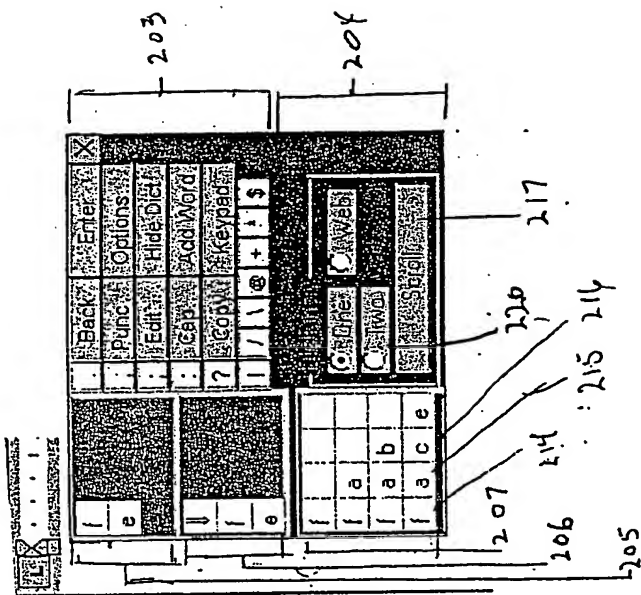


Fig 78

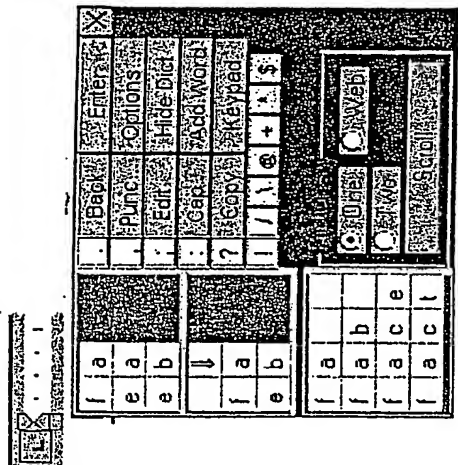
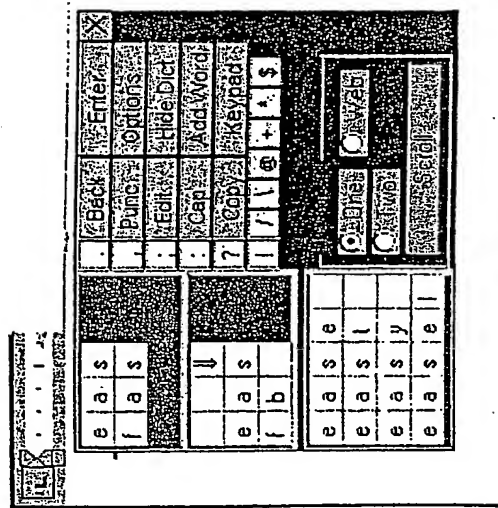


FIG 79



08.15.80

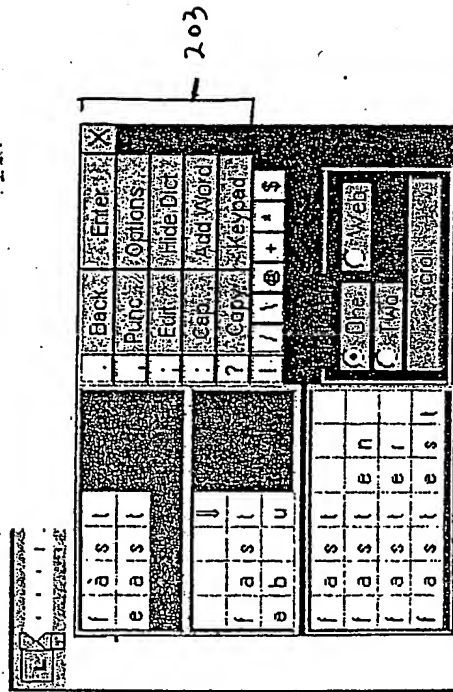
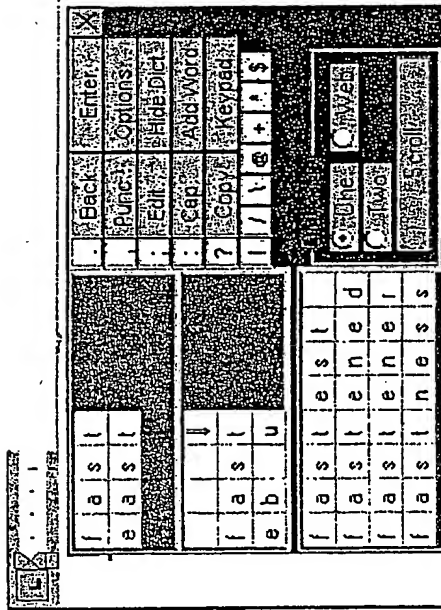


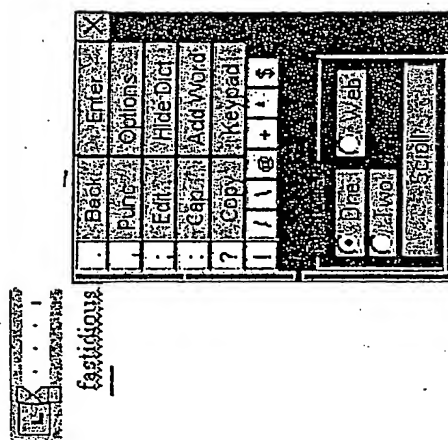
Fig. 81



11

The screenshot shows the Windows 95 Start menu. The Start button is at the top left. The menu lists the following items: Programs, Recent Programs, Favorites, My Computer, My Recent Places, Control Panel, Settings, Find, Run..., Log Off, and Turn Off Computer. A search bar is at the bottom of the menu. The taskbar at the bottom shows the Start button, a taskbar with icons for My Computer, Internet Explorer, and Word, and a system tray with a clock showing 11:58 AM on 11/11/95.

11



[illegible]

Fig 86

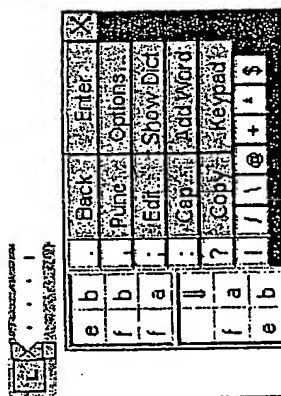


FIG 87

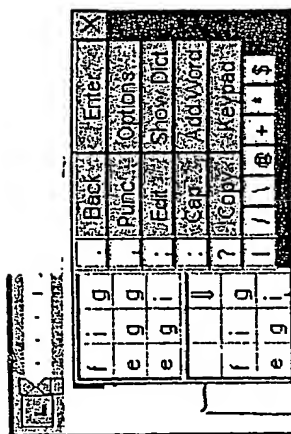
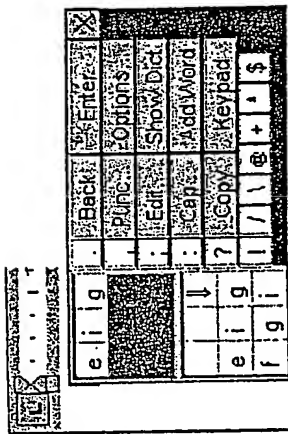


FIG 88



10

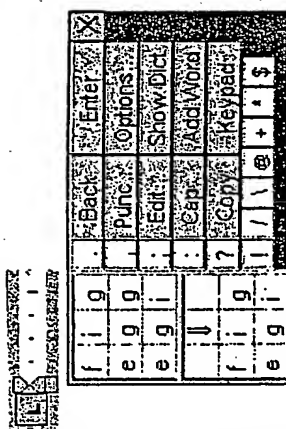
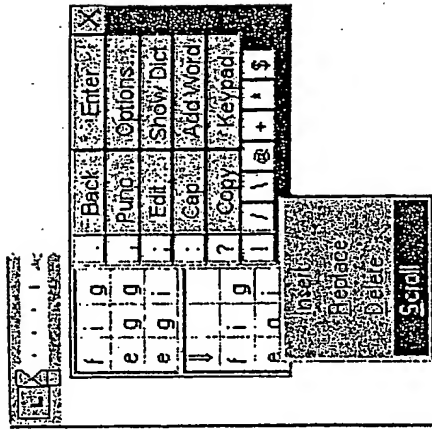


Fig 91



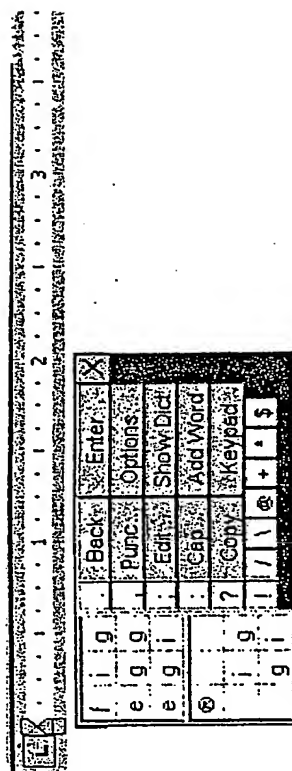
[illegible]

EX

i	i	Back	Enter	X
g	g	Punct	Options	
i	g	Edit	Show Dict	
		Cap	Add Word	
U		? Copy	Key Pad	
g	g	/	@	+
			*	\$

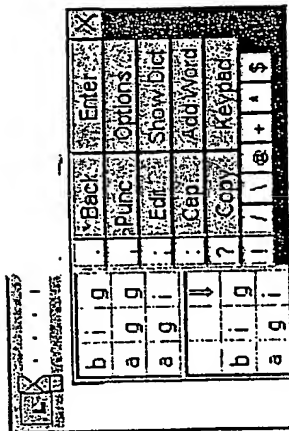
[illegible]

Fig. 96



517 417 117

Fig 97



F-998

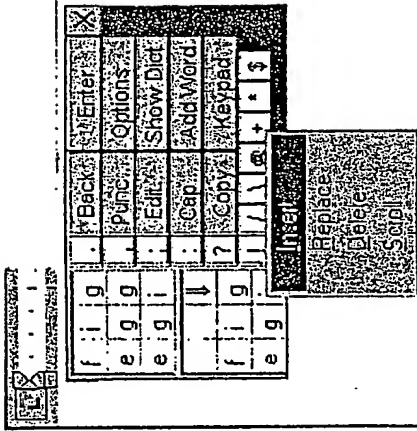


Fig. 99

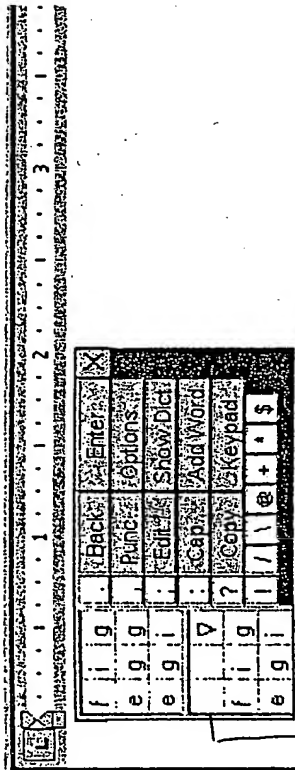


Fig 100

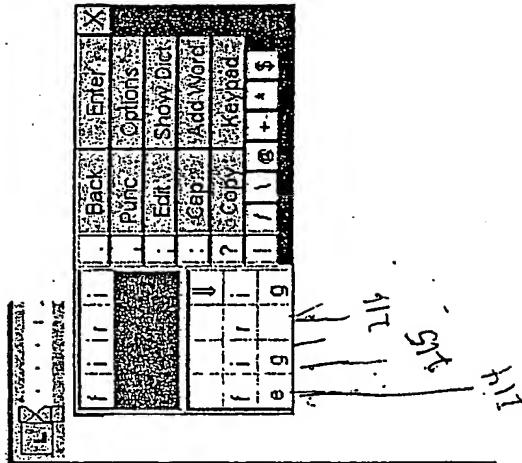


Fig. 101

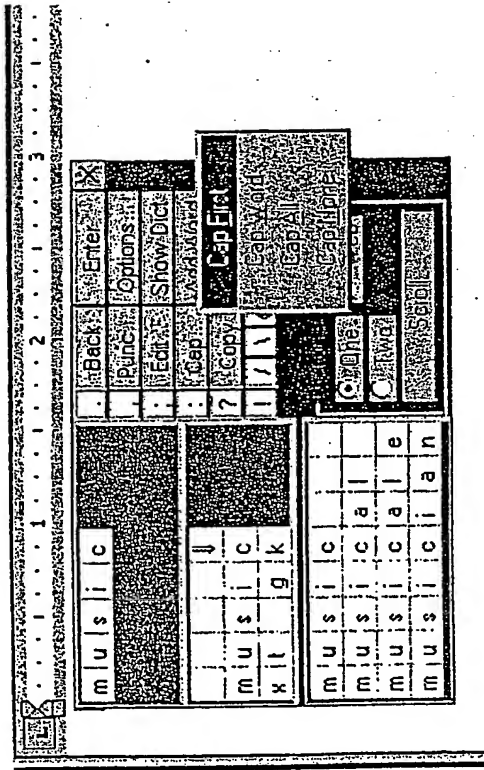


Fig. 102

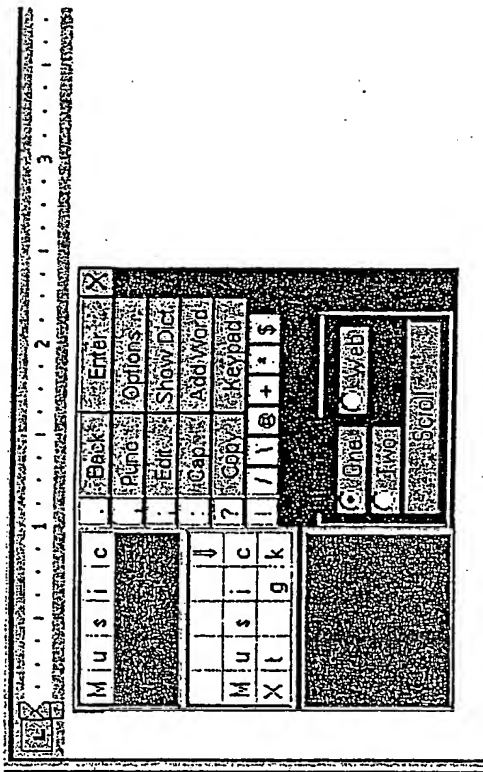
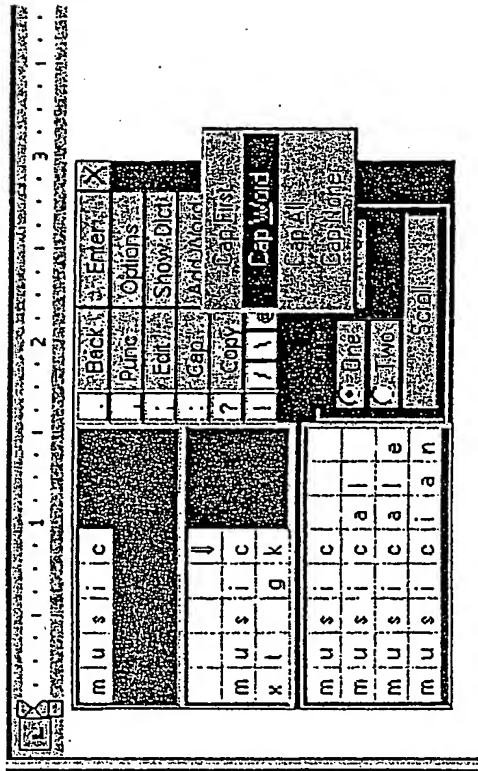


Fig. 103



11

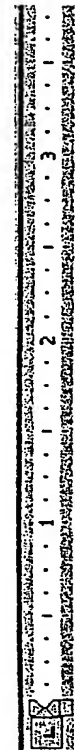


Fig. 105

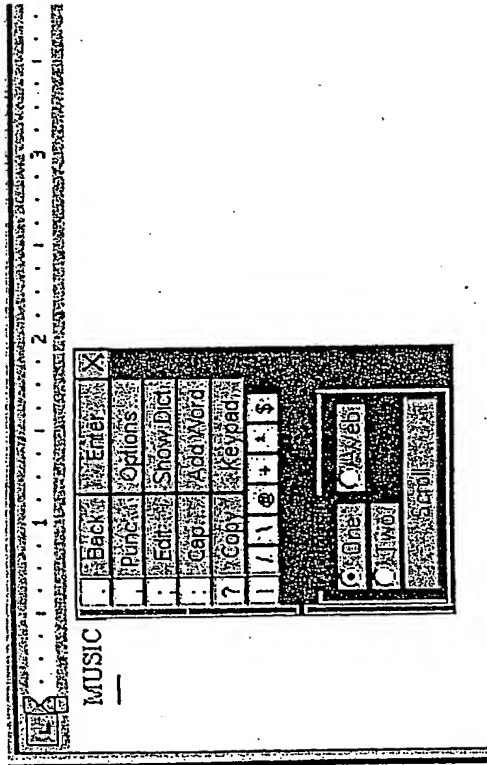
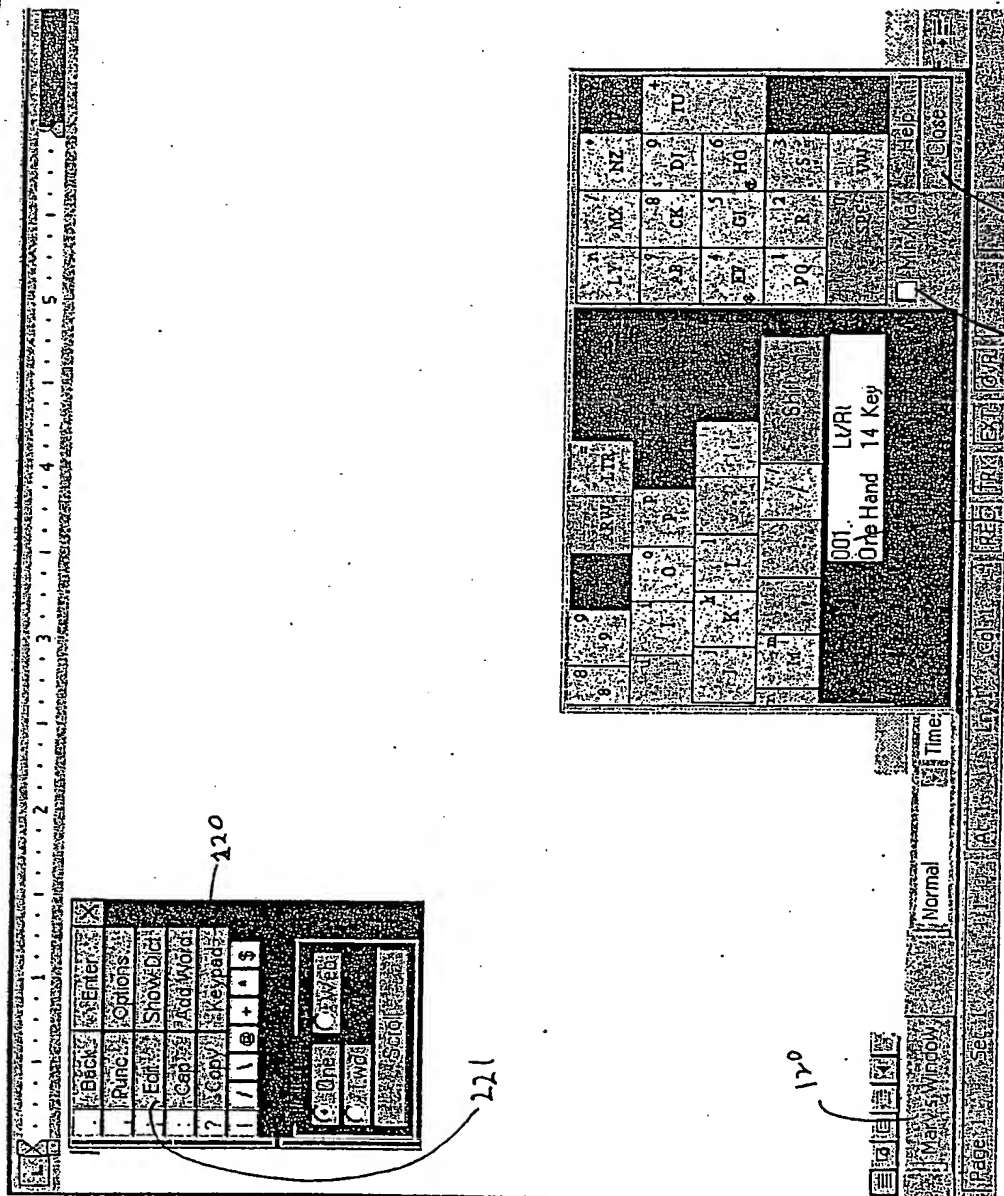


Fig. 106



11

1	LY	2	/	3	NZ	4	+	5	TU	6	
7	AB	8	CK	9	DI	10		11	TO	12	
13	EV	14	GI	15		16		17	SS	18	
19	PD	20	R	21	SO	22		23		24	
25		26	SP	27	U	28		29	VW	30	

☒ Min/Max Help
 ☐ Close

Fig. 108

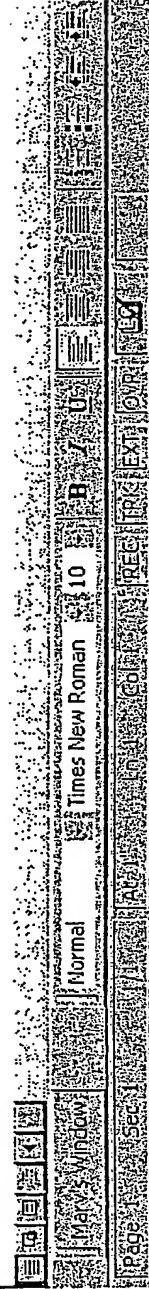
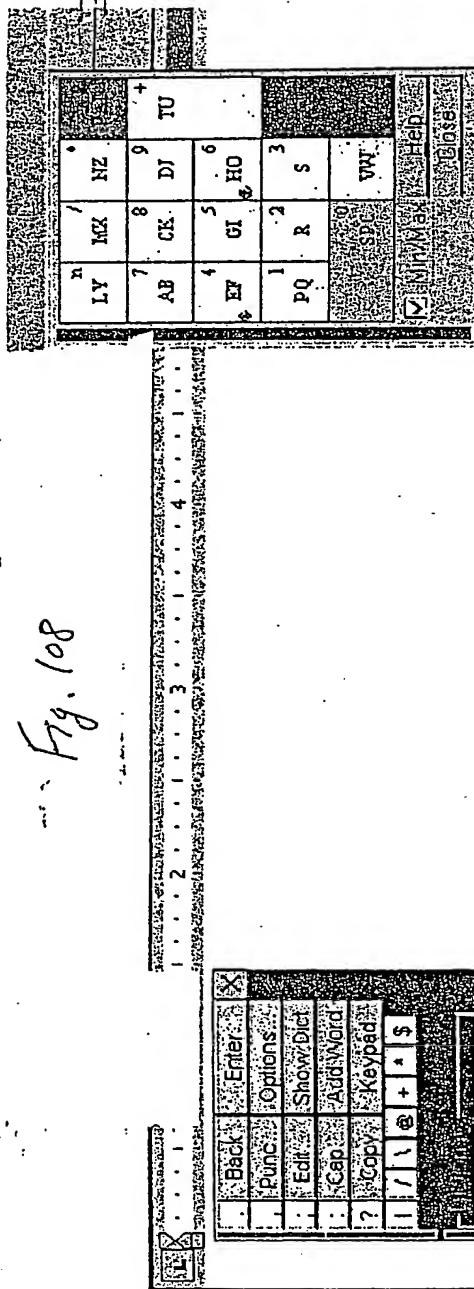
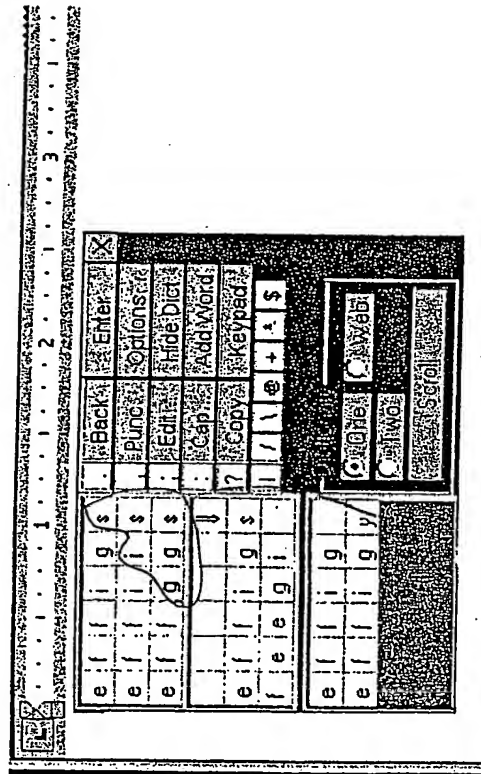


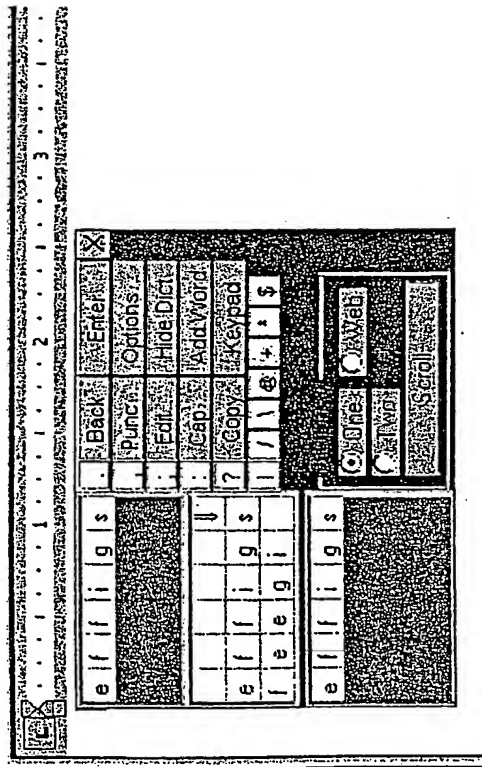
Fig. 109



11



Fig. 111



F19112✓

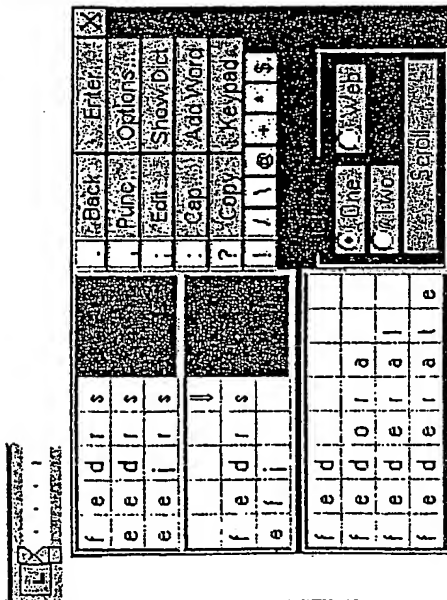


FIG 1A

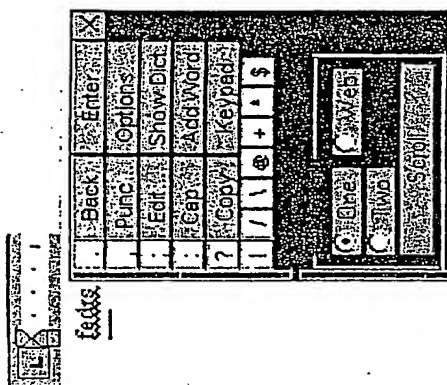


Fig 114

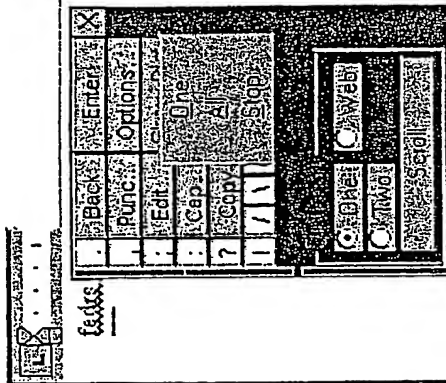


Fig. 115

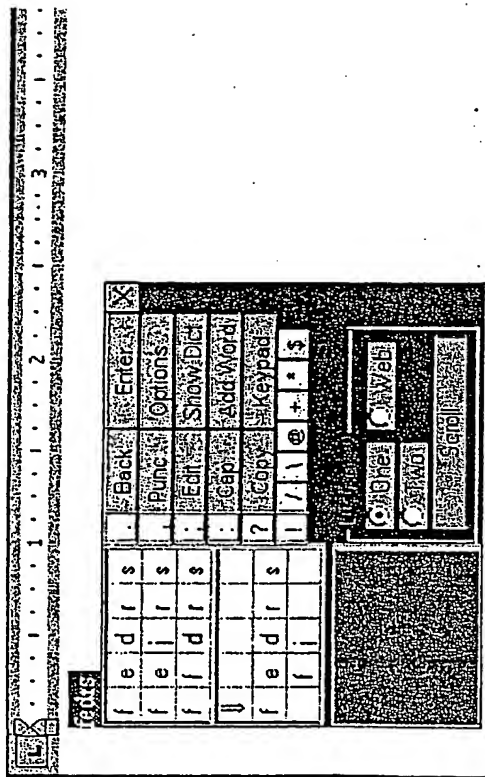


Fig 11b

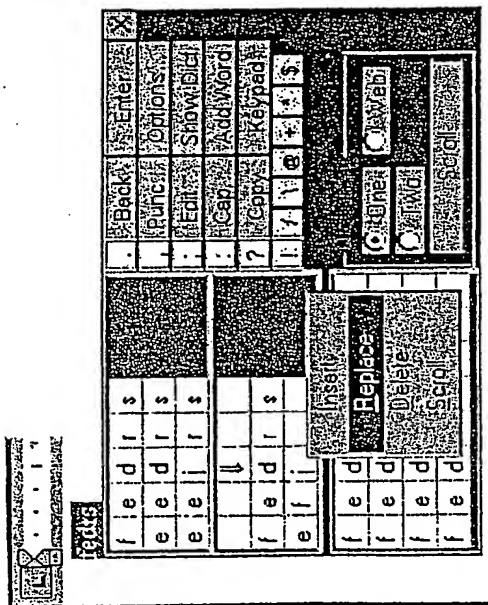


Fig. 117

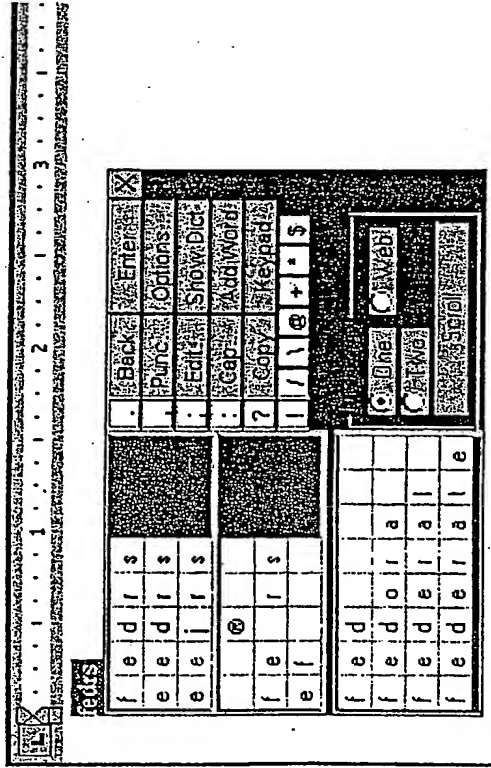
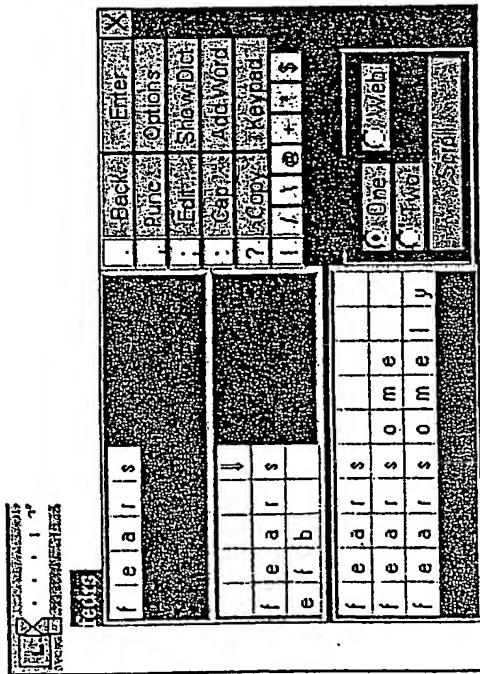


FIG 118

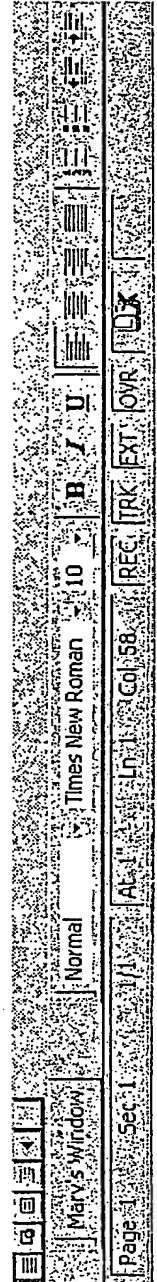
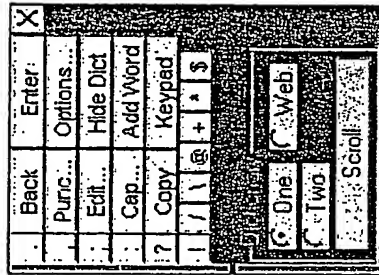


11

Fig 120



It is a new nation conceived in liberty and dedicated to |



F19 121



It is a new nation conceived in liberty and dedicated to

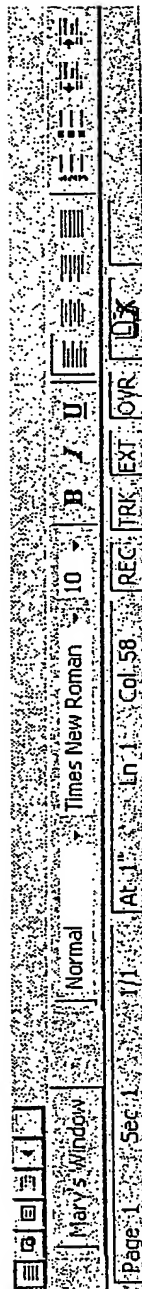
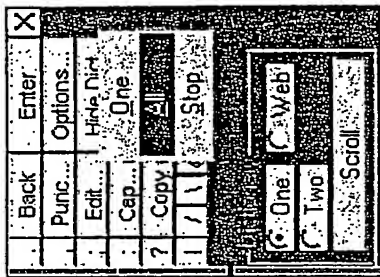


Fig. 122

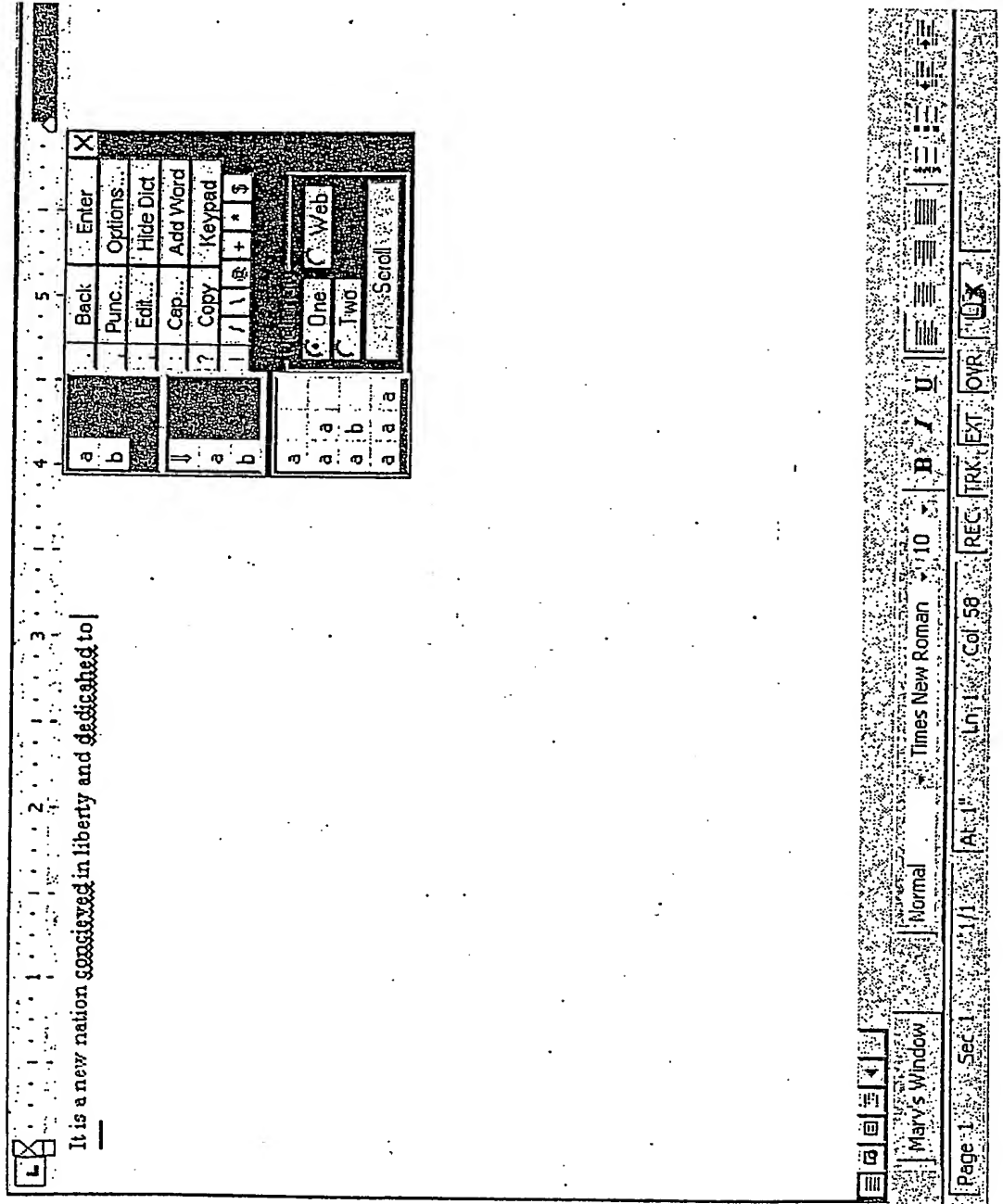
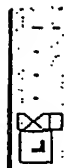
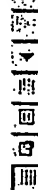


Fig 123



It is a new nation goosieyed in liberty and dedigab

c	o	n	c	e	v	e	d	Back	Enter	X
c	o	n	c	e	v	e	d	Punc...	Options...	
c	o	n	c	e	v	e	d	Edit...	Hide Dict	
								Cap...	Add Word	
c	o	n	c	e	v	e	d	Copy	Keypad	
k	h	z	k	g	f	w	f	/	@	+
c	o	n	c	e	r	g	e	<div> <input type="button" value="One"/> <input type="button" value="Two"/> <input type="button" value="Web"/> <input type="button" value="Scroll"/> </div>		



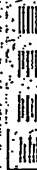
Mary's Window

Normal

Times New Roman

10

B I U



Page 1

Sec 1

At 1

Ln 1

Col 59

REC

TRK

EXT

OVW



F19 124



It is a new nation conceived in liberty and dedicated to

Handwritten text and a menu bar:

c o n c e i v e d

c o n c e i v e d

k h z k f g w f i

c o n c e i v e d

Menu: Back Punc... Edit... Cap... Copy ? / \ @ + * \$ Enter Options Hide Dict Add Word Keyboard

One Two Scroll

Handwritten text and a menu bar:

Marv's Window

Normal Times New Roman 10 B I U

Page 1 Sec 1 Ln: 1 Col: 59 REC TRX EXT OVR

Fig 125



It is a new nation conceived and dedicated to

d e d i c a h e d	Back	Enter	X
d e d i c a h e d	Punc...	Options...	
d e d i c a h e d	Edi...	Hide Dict	
	Cap...	Add Word	
d e d i c a h e d	? Copy	KeyPad	
f g k b o f	/ \ @ + * \$		
d e d i c a t e	One: C Web		
d e d i c a t e d	Two:		
d e d i c a t o r			
d e d i c a t i o n			

Page 1	Sec 1	1/1	At 1	Ln: 1/2	Col: 29	REC	TRK	EXT	OWR	DX
Mary's Window										
Normal										
Times New Roman 10										
B I U										

Fig 126



It is a new nation conceived and dedicated to

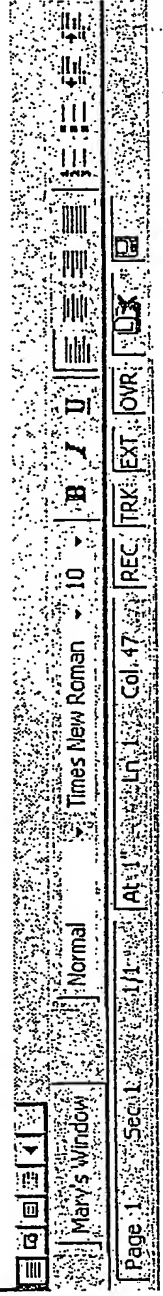
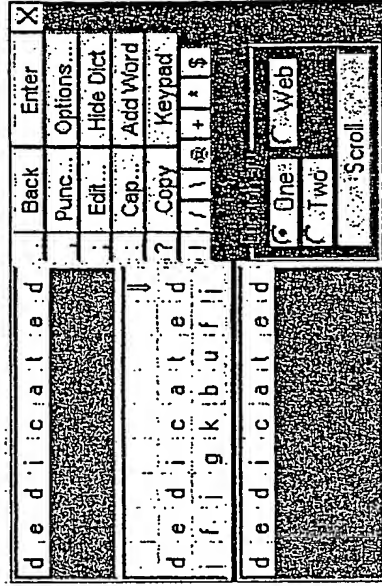


FIG 127

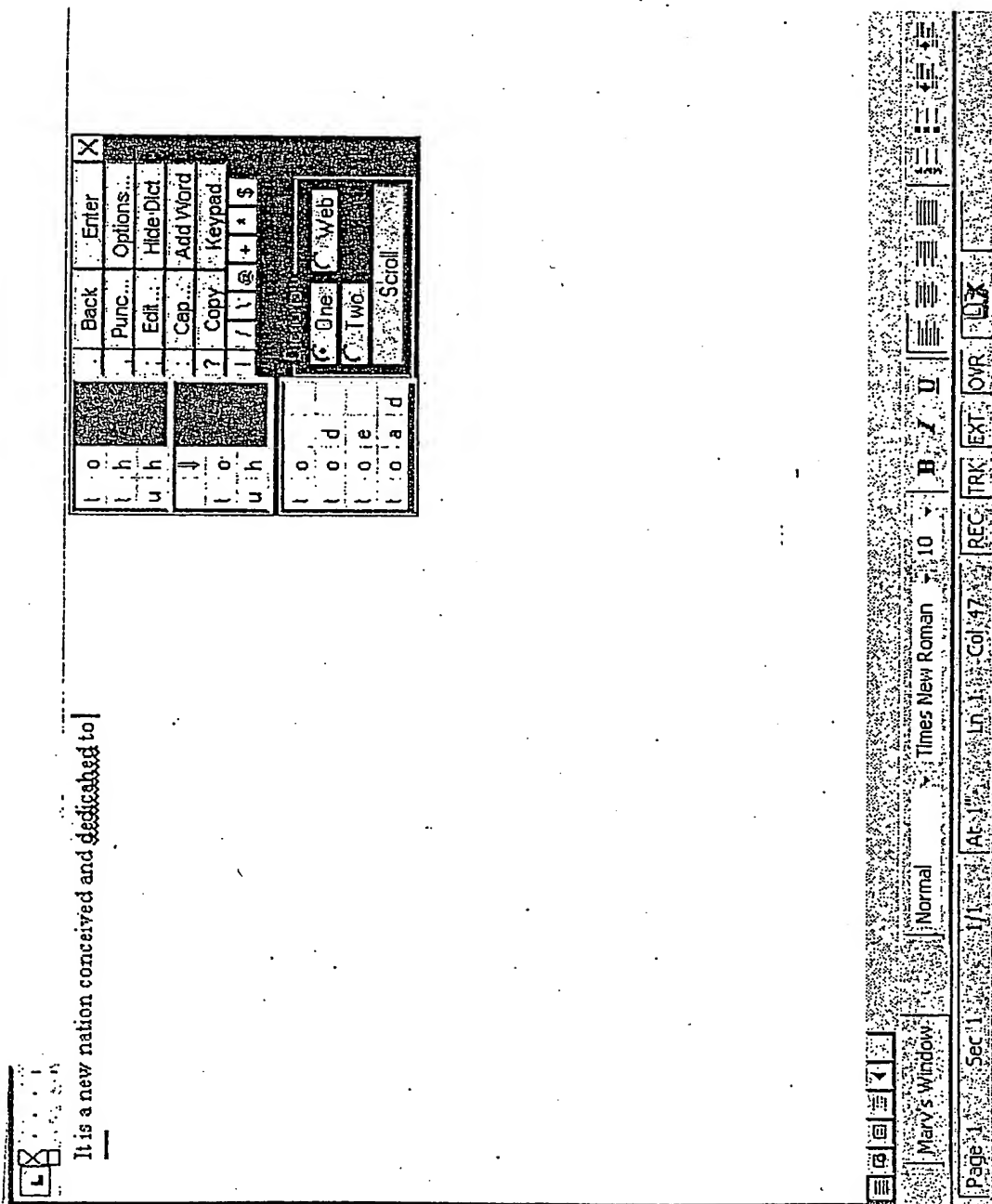
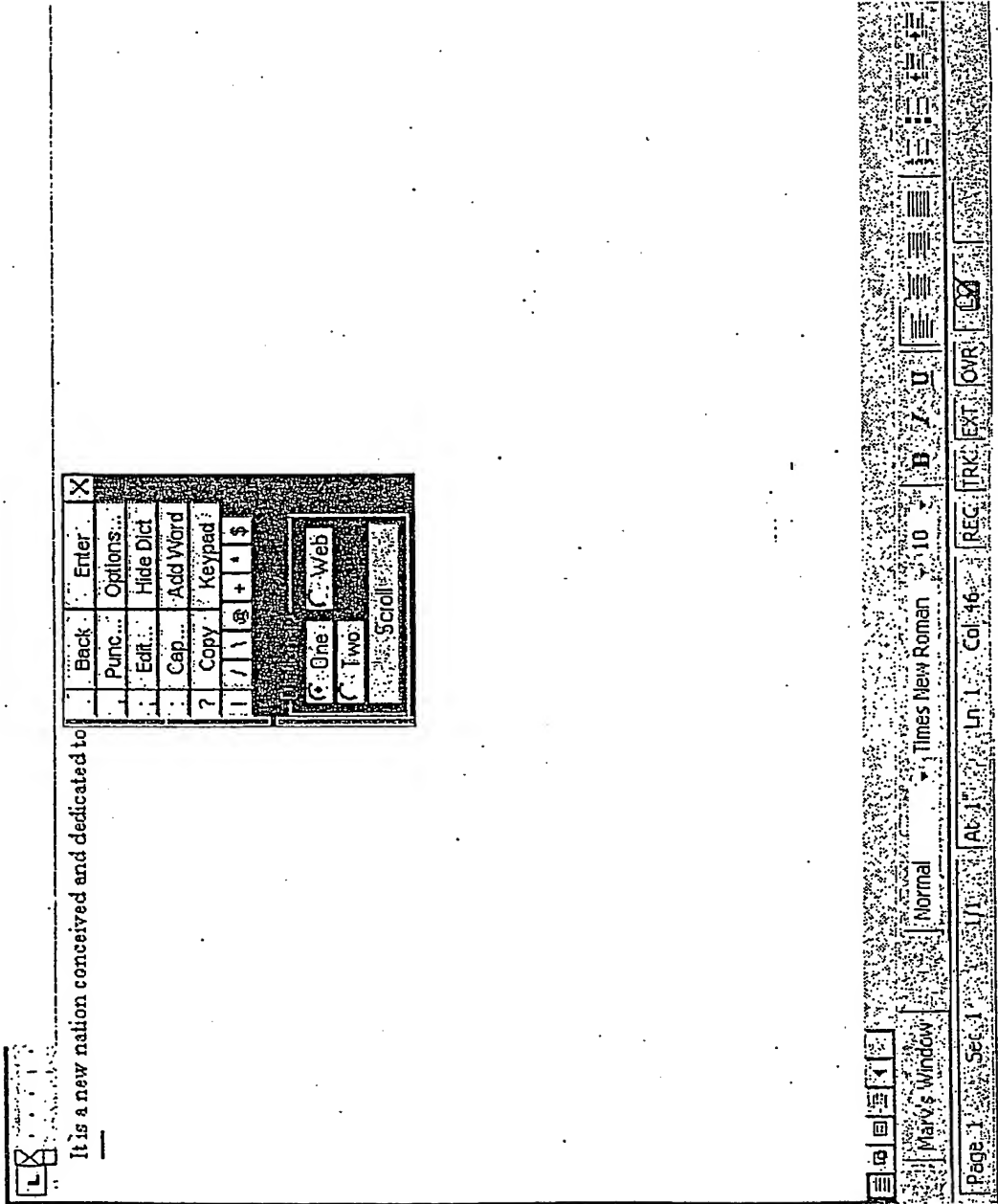


FIG 128

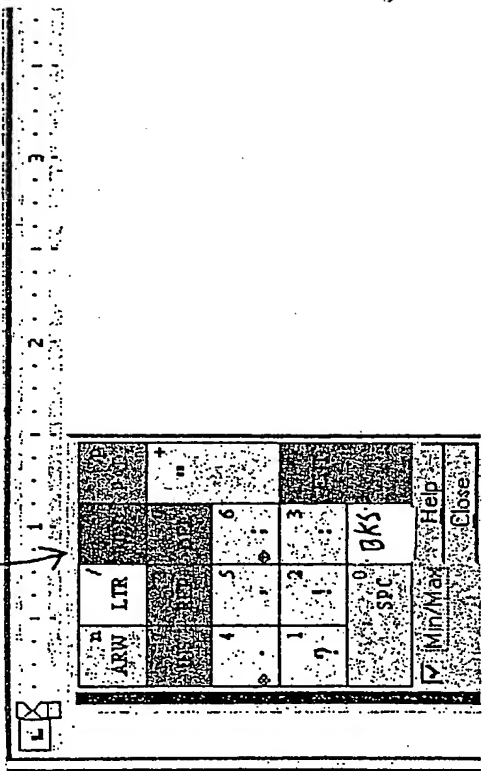


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11/12

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009

Fig. 131



009 ↑

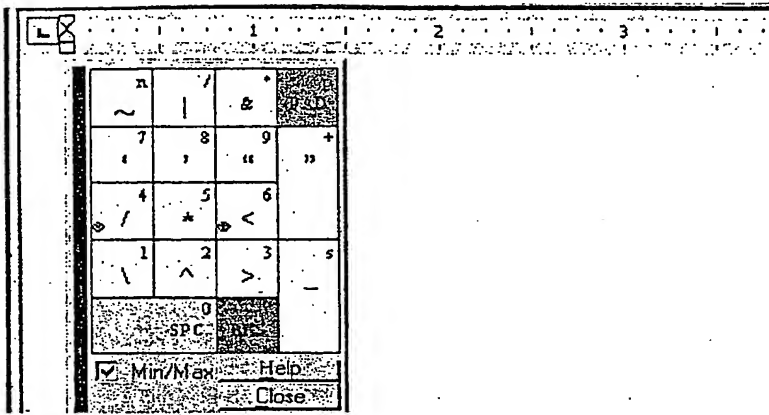
Fig. 132

Figure 132 shows a standard numeric keypad layout, likely from a document or form. The keypad is organized into a grid with various symbols and numbers. The layout is as follows:

#	\$	@	
7	8	9	+
%	-	.	/
4	5	6	
[]	()
1	2	3	
{	}	~	
0	SPC		
<input checked="" type="checkbox"/> Min/Max		Help	
		Close	

0010 ↑

- fig. 133



0011

Fig. 134

ARW	LTR		
7	8	9	+
7	8	9	+
4	5	6	
4	5	6	
1	2	3	
1	2	3	
	0		
	0		

☒ Min/Max Help Close

0012↑

Fig

135

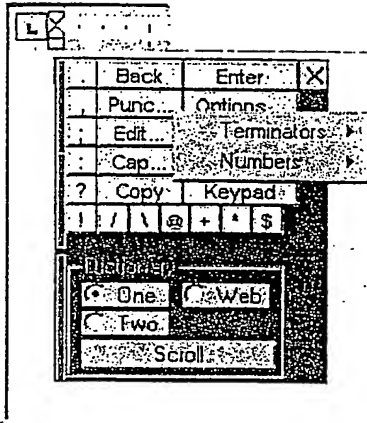


Fig. 136

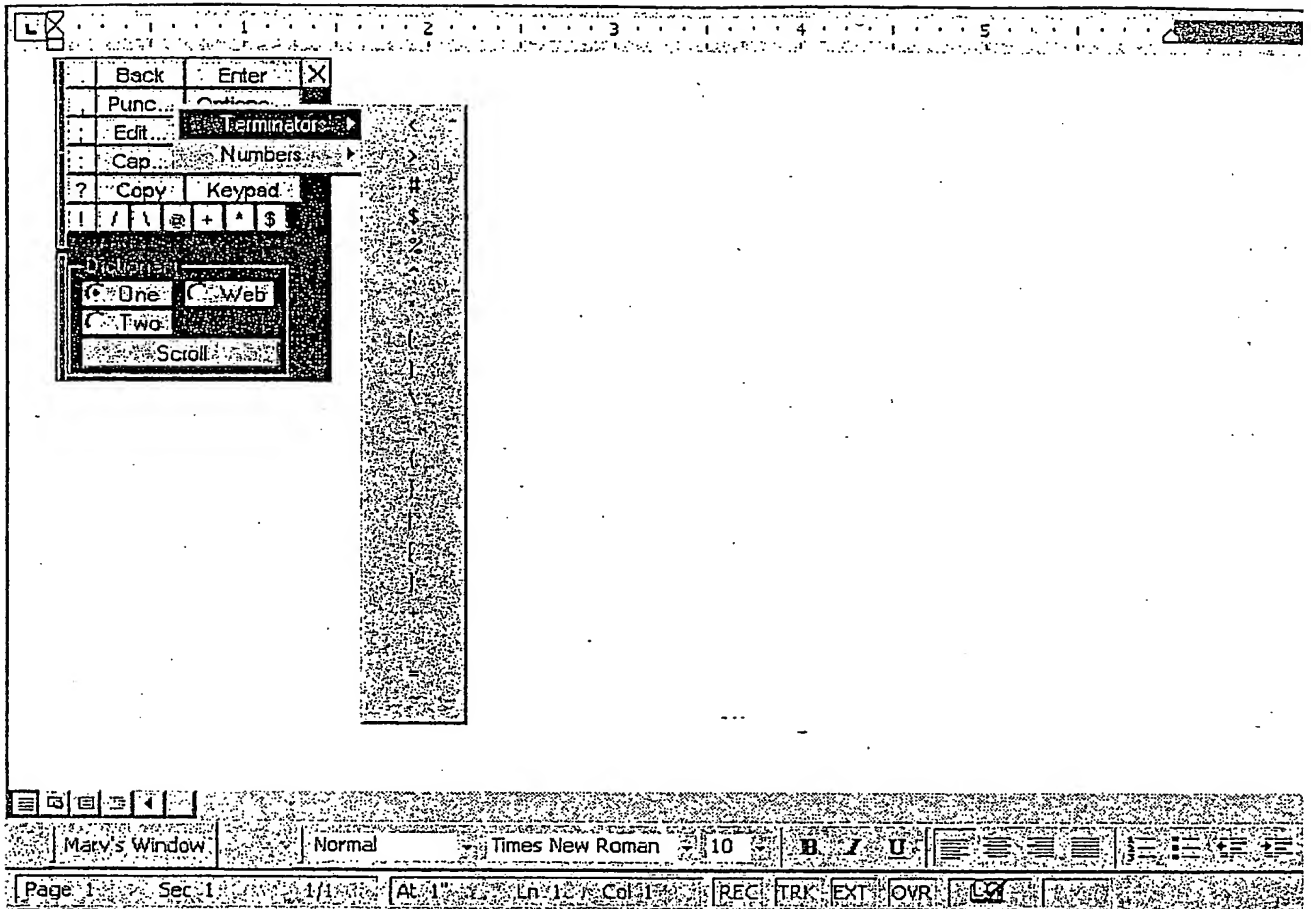
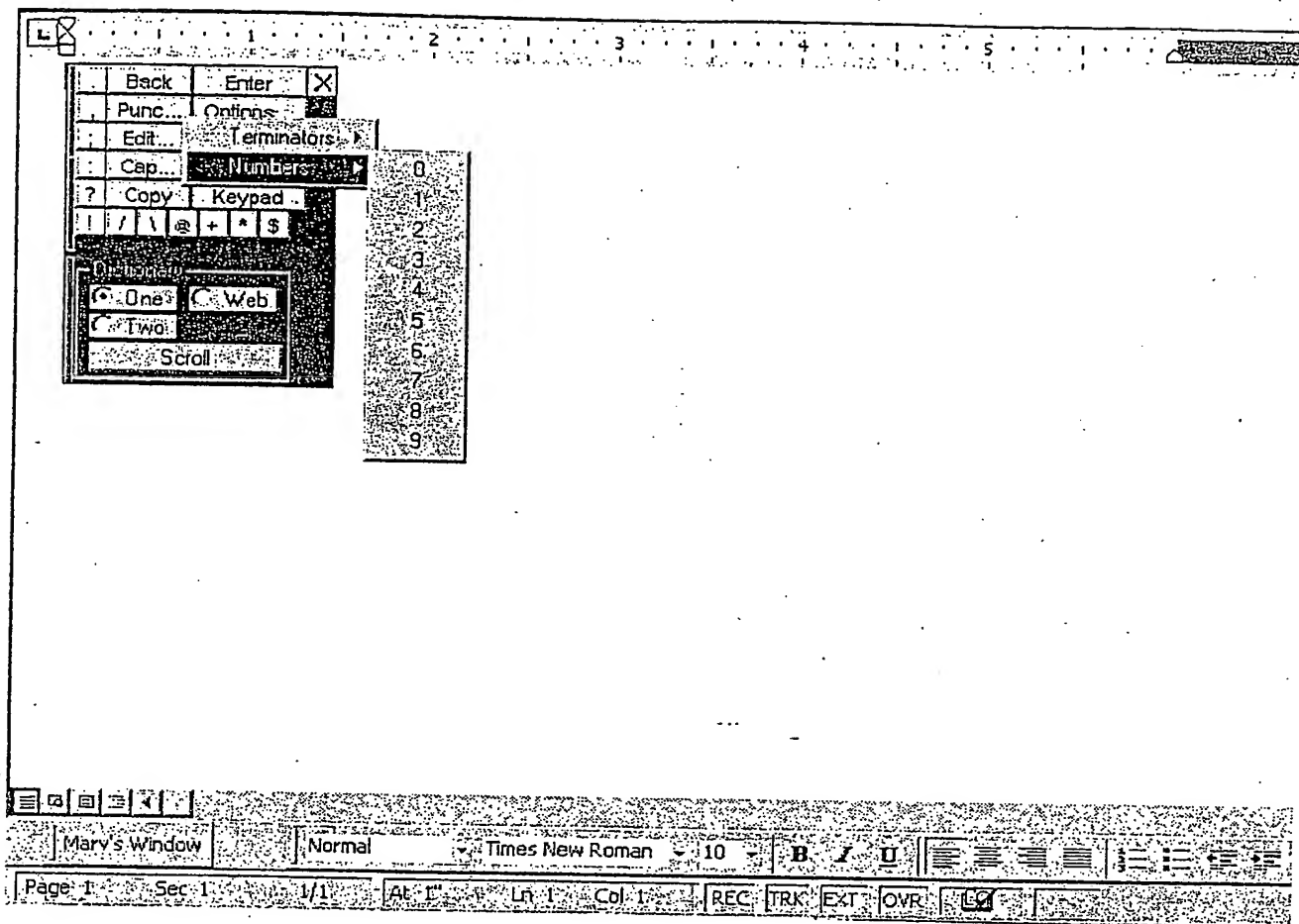


Fig. 137



001B

L X										2										3									
3		9		ARW		LTR				LX		MY		NZ															
u		i		o		p				7		8		9		+													
j		k		l						AB		CK		DJ		TW													
J		K		L		;		'		4		5		6															
n		m				/		Shift		EF		GI		HO															
M		,		.		/		Shift		1		2		3															
001 LWR																													
One Hand 14 Key																													
										0																			
										SPT VW																			
										Min/Max Help																			
										Close																			








0023 ↗



[illegible]



[illegible]

[illegible]

004B ↑

Mary's Window Normal Times New Roman 10 B I U  

Page: 1 Section: 1 Ab: 1" Ln: 1 Col: 1 REC: TRIC: EXC: OVR:  

[illegible]

0055

0072

FIG 147

SPACE BAR										BKS		WRD ARW LTR		AB		EF		LY		PAD	
										INS		REP		CK		GI		MX		TU	
										DEL				DJ		HO		NE			
										ENT				PR		R		S		ENT	
										MIN		MAX				SPC		VW			
HELP																					
CLOSE																					

001 C-1

FIG 148

[illegible]

001 6-20?

FIG 149

1	2	3	4	5	6	7	8	9	WORD	AR	WLT	BKS	AR	LTR	OKS	PAD
Q	W	E	R	T	Y	U	I	O	P	INS	REP	DEL	AB	EF	LY	
A	S	D	F	G	H	J	K	L	M	N		ENT	CK	GF	MX	TU
HELP	Z	X	C	V	B	N	M					MIN MAX	DJ	H6	NZ	ENT
CLOSE															SPC	VW
SPACE BAR																

002-B

[illegible]

003B

FIG 151

SPACE BAR										SPC		PAD	
<div> <div> <div>Help</div> <div>Close</div> </div> <div> <div>W</div> <div>E</div> <div>A</div> <div>Z</div> </div> <div> <div>Q</div> <div>D</div> <div>C</div> <div>X</div> </div> <div> <div>F</div> <div>H</div> <div>G</div> <div>N</div> </div> <div> <div>I</div> <div>O</div> <div>J</div> <div>S</div> </div> <div> <div>L</div> <div>P</div> <div>M</div> <div>5</div> </div> <div> <div>V</div> <div>R</div> <div>T</div> <div>1</div> </div> <div> <div>U</div> <div>Y</div> <div>X</div> <div>2</div> </div> <div> <div>N</div> <div>B</div> <div>7</div> <div>3</div> </div> <div> <div>M</div> <div>A</div> <div>8</div> <div>4</div> </div> <div> <div>V</div> <div>L</div> <div>9</div> <div>5</div> </div> <div> <div>W</div> <div>P</div> <div>0</div> <div>6</div> </div> <div> <div>Q</div> <div>O</div> <div>1</div> <div>7</div> </div> <div> <div>R</div> <div>N</div> <div>2</div> <div>8</div> </div> <div> <div>S</div> <div>M</div> <div>3</div> <div>9</div> </div> <div> <div>T</div> <div>L</div> <div>4</div> <div>0</div> </div> <div> <div>U</div> <div>K</div> <div>5</div> <div>1</div> </div> <div> <div>V</div> <div>J</div> <div>6</div> <div>2</div> </div> <div> <div>W</div> <div>I</div> <div>7</div> <div>3</div> </div> <div> <div>X</div> <div>H</div> <div>8</div> <div>4</div> </div> <div> <div>Y</div> <div>G</div> <div>9</div> <div>5</div> </div> <div> <div>Z</div> <div>F</div> <div>0</div> <div>6</div> </div> <div> <div>1</div> <div>E</div> <div>1</div> <div>7</div> </div> <div> <div>2</div> <div>D</div> <div>2</div> <div>8</div> </div> <div> <div>3</div> <div>C</div> <div>3</div> <div>9</div> </div> <div> <div>4</div> <div>B</div> <div>4</div> <div>0</div> </div> <div> <div>5</div> <div>A</div> <div>5</div> <div>1</div> </div> <div> <div>6</div> <div>Z</div> <div>6</div> <div>2</div> </div> <div> <div>7</div> <div>Y</div> <div>7</div> <div>3</div> </div> <div> <div>8</div> <div>X</div> <div>8</div> <div>4</div> </div> <div> <div>9</div> <div>W</div> <div>9</div> <div>5</div> </div> </div>													

INS

REP

DEL

ENT

MIN MAX

[illegible]

1006B

1	2	3	4	5	6	7	8	9	WRD	ARW	LTR	BKS
Q	W	E	D	A	T	Y	L	M	X	N	Z	INS
A	E	F	G	H	I	J	K	L	M	N	O	REP
DEL	ENT	ENT	ENT	ENT	ENT	ENT	ENT	ENT	ENT	ENT	ENT	ENT
HELP	CLOSE	ENT	ENT	ENT	ENT	ENT	ENT	ENT	ENT	ENT	ENT	ENT
SPACE BAR												
5 keys												
MIN MAX												
ENT												
PAD												

007B

FIG 154

1	2	3	4	5	6	7	8	9	WRD	ARW	LTR	BKS	PAD
Q	A	B	C	D	E	F	G	H	I	J	K	L	M
N	O	P	Q	R	S	T	U	V	W	X	Y	Z	ENT
HELP	CLOSE	MIN	MAX	SPACE BAR	MIN	MAX	SPACE BAR	MIN	MAX	SPACE BAR	MIN	MAX	ENT

007 C